Quality Review Report

2015-2016

Science Skills Center High School for Science, Technology and the Creative Arts

High School K419
49 Flatbush Avenue Extension
Brooklyn
NY 11201

Principal: Dahlia McGregor

Date of review: April 14, 2016
Lead Reviewer: Clarence Williams
Science Skills Center High School for Science, Technology and the Creative Arts is a high School with 552 students from grade 9 through grade 12. In 2015-2016, the school population comprises 6% Asian, 72% Black, 18% Hispanic, and 2% White students. The student body includes 3% English Language Learners and 15% students with disabilities. Boys account for 55% of the students enrolled and girls account for 45%. The average attendance rate for the school year 2014-2015 was 89.7%.

### School Quality Criteria

#### Instructional Core

**To what extent does the school...**

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<thead>
<tr>
<th>Area of:</th>
<th>Rating:</th>
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<tbody>
<tr>
<td>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</td>
<td>Additional Findings</td>
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<tr>
<td>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 <em>Framework for Teaching</em>, aligned to the curricula, engaging, and meets the needs of all learners so that all students produce meaningful work products</td>
<td>Celebration</td>
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<tr>
<td>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</td>
<td>Additional Findings</td>
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#### School Culture

**To what extent does the school...**

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<tr>
<th>Area of:</th>
<th>Rating:</th>
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<tbody>
<tr>
<td>3.4 Establish a culture for learning that communicates high expectations to staff, students, and families, and provide supports to achieve those expectations</td>
<td>Additional Findings</td>
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#### Systems for Improvement

**To what extent does the school...**

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<th>Area of:</th>
<th>Rating:</th>
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<tr>
<td>4.2 Engage in structured professional collaborations on teams using an inquiry approach that promotes shared leadership and focuses on improved student learning</td>
<td>Focus</td>
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Findings
Across classrooms, teaching practices are aligned to the curricula and reflect an articulated set of beliefs about how students learn best that is informed by the Danielson Framework for Teaching and the instructional shifts. Across classrooms, student work products and discussions reflect high levels of student thinking and participation.

Impact
Across classrooms, there are high levels of student participation in lessons that engage students in critical thinking.

Supporting Evidence
- Teachers articulated that students learn best through student-centered lessons, peer review, and by annotating their work. An example of peer review was seen in a social studies class focusing on the use of questioning and discussion. Students led discussions on analyzing how progressives made a difference in America. Working in small groups, they formulated questions, responded to peer questions, and gave each other feedback. In a grade 9 English poetry class, students annotated the text of the poem “The Wind” to inform their discussion with peers and posed questions such as “What is the significance of the title?” For the poem, “Women Work,” they asked peers “Who is the speaker of the poem?”

- In a grade 9 Science class, the aim of the lesson was for students to annotate text and develop oral language and argumentative skills via participation in an informed debate on a controversial issue. Students worked in groups to annotate a text on global warming using the Cornell note-taking strategy, creating columns to record key words/questions and key ideas. They took a position of agree or disagree referring to the text to support their points as a fellow student served as a moderator. Students evaluated themselves using an evaluation sheet that required them to identify frustrations, conclusions drawn, and what they might change about their participation in future debates.

- In an English Language Arts Integrated Co-Teaching class, students worked in small groups to support an argumentative essay on the topic of “Should the Government regulate the food and drinks we consume?” Students worked with partners to agree or disagree. During one partnership observed, one student stated agreement citing that as individuals we do not always make the right decisions for ourselves supporting his statement by referencing health issues people are facing based on bad diets. Additionally, students cited text-based evidence to provide support for their position in response to the question, “What will be next, and where does government control begin and end?”
### Area of Focus

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<th>Quality Indicator: 4.2 Teacher teams and leadership development</th>
<th>Rating: Proficient</th>
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**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 and the instructional shifts. Distributed leadership structures are in place so that teachers have built leadership capacity but structures are not yet fully embedded across the school.

**Impact**

Collaborative inquiry and distributive leadership is strengthening the instructional capacity of teachers. Teachers have a voice in some key decisions that affect student learning across the school.

**Supporting Evidence**

- During a math teacher team meeting, teachers used a protocol to review student work and then identify strengths, weaknesses, misconceptions, and gaps in learning. The team’s goal was to identify which skills students need in order to be successful, what kind of feedback students should receive, and how they can convey methods to students for improving their performance to reach mastery in a particular standard. The team discussed and recorded that students needed more time with the content and that the curriculum should be modified to reflect it. They decided to target the lower third performing students by looking at assessment item analysis to target their weaker areas of performance. They also discussed using a SOLVE (Study, Organize, Line-up, Verify, Examine) strategy rubric for math.

- Teacher team members stated that they have the opportunity to take the initiative in professional development and make adjustments within the curriculum. Team members shared a document highlighting the role of the lead teachers who coordinate the teacher team work groups in creating teacher binders that include student assessments, meeting agendas, and student work. Some team members stated that the principal has a clear vision and focus for the school, as evident in the school leadership written document Key Roles of the Teacher Teams that lists the goals for each team, areas of responsibility and responsibilities of the principal, the assistant principal, and the department chairs. However, some teachers expressed that building leadership limits the amount of autonomy given to teachers in regards to distributive leadership and that although leadership practices for teachers are in place, final decisions such as in curriculum and unit planning come from the principal.

- The math team uses the document: *Rating Your Teacher Team*, by Katherine C. Boles, as a reference for their work. The team reflected that they believe that leadership should be encouraged among team members and that the team is most successful when leadership is distributed to all and valued by each team member. Math department common planning meeting minutes and agenda document that a teacher facilitator leads the team. Agenda notes included directives such as “Please update professional binders.” and “It is mandatory that you enter a comment for students who are failing.” During the meeting observed, teachers discussed how they could modify instruction based on their analysis of student performance on the 2015 Algebra Regents, deciding to focus on strategies such as effective use of calculators and using prior knowledge to solve problems.
Findings
School leaders and faculty ensure that curricula are aligned to Common Core Learning Standards and content standards, integrate the instructional shifts, and make purposeful decisions to build coherence. Curricula and academic tasks consistently emphasize rigorous habits and higher-order skills across grades and subjects and for English Language Learners and students with disabilities.

Impact
Purposeful curricula decisions are building coherence that promotes college and career readiness for all students.

Supporting Evidence
- Curricula for integrated algebra illuminated the math instructional shift of application for students to use math and to choose an appropriate theorem or concept to solve an algebraic equation. Another task in which the aim was to solve quadratic equations using the quadratic formula, students were required to use multiple representations to represent an explain problem situations support application and intensity as they practiced and expressed understanding.

- The curricula is built on an instructional framework that includes standards, assessment, instruction, and questions that promote thinking. An integrated algebra curriculum states that “Students will communicate in verbal or written form, the reasoning process that leads to a conclusion.” This was evident in a document entitled math sentence starters in which students had to fill in blanks such as “I think…because… and the answer is… because…” A global studies pacing calendar outlined expected performance indicators for student citation of strong and thorough textual evidence to support their text analysis interpretation.

- In an algebra lesson plan, Webb’s Depth of Knowledge matrix was used to create higher-level questions such as “What are the more efficient ways of solving quadratics and how do you know?” In a social studies class lesson plan, a higher level Depth of Knowledge question required students to draw and analyze information from several sources to respond to the question “You are the President, the united mine workers strike, and the owners refuse to collective bargaining. The country needs coal. What can you do?”

- Purposeful decisions are made to prepare students for college and career in the implementation of the Early College School Program. Grade 9 students take four Regents exams and grade 10 and 11 students take Advanced Placement (AP) courses in addition to Regents exams, as well as attend Saturday classes for College Now classes. Grade 12 students take an introduction to college life course based on their major, two AP courses, and two College Now courses.
Quality Indicator: 2.2 Assessment | Rating: Proficient

Findings
Across classrooms, teachers use or create assessments, rubrics, and grading policies that are aligned with the school’s curricula. Across classrooms, teachers’ assessment practices consistently reflect the use of ongoing checks for understanding and student self-assessment.

Impact
Teachers and students have actionable feedback regarding student achievement. Teachers make effective adjustments to meet all students’ learning needs.

Supporting Evidence
- In most classes visited, teachers provided actionable feedback to students in writing, listing glows and next steps. An example of this was a glow comment “Beautiful work - easy to follow math and a phenomenal explanation, great use of vocabulary. Next steps - Actually show the check, although explaining it was accurate.” Feedback for posted work for a science class stated, “Shows great understanding of concept vocabulary, great illustration of concepts” and recommended “Add a reflection about your learning.” Some other examples of feedback observed included recognition of strengths such as “demonstrates an accurate understanding of important information” and outlining of next steps asking students to cite more textual evidence.

- Various rubrics were evident in all classrooms visited. A school-wide discussion rubric designed to measure preparation, use of textual evidence, active listening, participation and engagement towards reasoning was posted in most classes visited. An English classroom posted a character analysis rubric evaluating skills in interpretation, supporting evidence, and organization of ideas and mechanics.

- In an English class, students worked on a peer review checklist checking for inclusion of argument or topic sentences, explanation or analysis of evidence, and use of transition words or phrases. The English teacher also provided a sample of a thematic essay peer assessment and asked students to assess essays by writing commendations on strengths noted and suggestions for improving weaknesses, as well as to assign a final grade with additional comments. One student’s assessment included the feedback: “It was all about facts, your topic was never off topic, keep it up.” As the students worked, the teacher circulated the room observing student work and interjected clarifying questions where students were off track.
Quality Indicator: 3.4 High Expectations  
Rating: Proficient

Findings
School leaders consistently communicate high expectations and provide training to the entire staff. Teacher teams and staff establish a culture for learning that consistently communicates high expectations for all students and offers them detailed guidance and advisement supports.

Impact
There is a system of accountability for set expectations. Students are prepared for the next level of their education.

Supporting Evidence
- The principal has provided documentation for teachers regarding expectations for every classroom regarding the elements to be included within all lesson plans. While the principal states that lesson development is at the discretion of the teacher, all lessons must be student-centered, include an aim, motivation, pivotal questions, and must also include a do-now, and a mini lesson. An algebra lesson reviewed included an aim, a mini-lesson, questions using Webb’s Depth of Knowledge criteria, and activities for differentiated instruction.

- In the staff handbook, the principal states that it is an expectation that teachers participate in intervisitations. To ensure that teachers are in compliance with this expectation, the principal has distributed an intervisitation checklist for observation of instruction and assessment. The checklist is used to gauge what teachers see in the classroom during their visit. Visiting teachers are required to email the checklist to the visited teacher with comments. A visiting teacher to an English class, provided feedback that there was evidence of a daily lesson plan, tools to show evidence of student learning, utilization of a rubric to complete an assessment task, and evidence of peer-to-peer questioning to clarify understanding.

- Teachers provided documentation on how they communicate with students regarding high expectations and preparation for next steps when students are experiencing struggle in academic areas. Using a school form called Plan for Student Success: Case Conferencing, students are asked to identify what they are in danger of failing and to state exactly what they are struggling with as well as to develop a written plan for success. The teacher completes the form listing the performance indicators that represent the areas where the student is struggling and the teacher’s plan for success. Teachers expressed that this level of ownership and collaboration helps students prepare for college because they are taking ownership of their growth and learning.

- The principal uses mid-year professional conversations to train teachers in reflection skills and to provide feedback to support their professional development. A follow-up communication to a teacher stated, “You have been able to implement many of the strategies to strengthen your skills and those of your students. The AVID [Advancement Via Individual Determination] training helped you a lot and you consistently use many of these strategies.”