Educating for the 21st Century

Data Report on the New York Performance Standards Consortium

A practitioner-developed & student-focused performance assessment system

317 East 67th Street
New York, New York 10065
917-821-8592
www.performanceassessment.org
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Credits: Photographs by Roy Reid, Design by Li Wah Lai
As I read “Educating for the 21st Century: Data Report on the New York Performance Standards Consortium,” I thought so this is what accountability should look like: a model of complex accountability. I admit I am profoundly suspect of prevailing claims of education progress measured only by test scores, but I am equally hungry for a deep accountability framework that speaks ethically and honestly about the challenges and accomplishments of schools.

From this report we learn about the Performance Standards Consortium, a network of public small schools serving a range of students, with diverse needs and gifts. Without being selective, these schools beat the odds in New York City and the nation in rates for student graduation, college going and college persistence for working class and poor youth. Designed with intentionality toward intellectual inquiry and performance, the schools challenge both high achieving students and those students who are most educationally vulnerable – English language learners, students receiving special education services, minority males. An astonishing counter-story to what we read in the newspapers about public schools.

With this volume, the Consortium presents two gifts to readers. First, we encounter a rich menu of accountability indicators much more revealing, ethical, provocative and useful than simple counts of standardized test scores. Second, at a time when I fear the public can no longer imagine what good public education looks like, for all children, where teachers stay and students engage, the Consortium has widened the public educational imagination for the schools our children deserve.

This is the investment our nation needs.

Michelle Fine  
Distinguished Professor of Psychology and Urban Education,  
The Graduate Center,  
City University of New York

At a time when schools in New York City are struggling to find ways to increase college readiness and insure that graduating students actually have the skills to succeed in college, the results achieved by schools within the New York Performance Standards Consortium are not just noteworthy, they are remarkable. On almost every measure of need and disadvantage these schools are serving a more challenging population of students, yet they are finding ways to meet their learning needs by focusing on the types of skills that are too often ignored: critical thinking, problem solving, research and expository writing, public speaking, independent initiative.

These schools are showing us what might be possible if we broadened our view of assessment to include a focus on evidence that students are receiving a broad range of academic and social
skills. They show us that truly innovative educational environments support great teaching and produce committed teachers, and that it’s possible to encourage students to take responsibility for learning without relying upon pressure, threats and fear.

Pedro A. Noguera,  
*Peter L. Agnew Professor of Education*  
*Steinhardt School of Culture, Education and Development*  
*New York University*

What this slim volume teaches us is that strong professional communities create powerful schools. Although “Educating for the 21st Century: Data Report on the New York Performance Standards Consortium” focuses on the startling results of the Consortium member public school students—their successful rates of graduation and college attendance and persistence—what caught my attention is the astonishing rate of teacher retention. That is a telling bit of datum—it means that in these schools, with their teacher-designed and revised assessment system, teachers finally have the professional respect, autonomy, and responsibility to make their schools work for their students. And the results speak to their success.

Teachers thrive in such an environment. They aren’t there for a two-year stint and then go on to “real” careers. They stay, and learn, and grow even better at what they do. Students can only benefit from the thoughtful collaboration and collegiality of caring and intelligent teachers. This report testifies to that, and it’s something that those who have the power to implement education policy need to pay close attention to.

*Deborah W. Meier*  
*Senior Scholor*  
*Steinhardt School of Education*  
*New York University*
The New York Performance Standards Consortium (Consortium) has developed a proven practitioner-developed, student-focused performance assessment system for its 28 member schools in New York City and State. Its validity was confirmed by the NY State Education Department and the NY Board of Regents in 1995 and reaffirmed in 2008 when additional schools were added. The main components of the system are:

- Practitioner-designed and student-focused assessment tasks
- External evaluators for written and oral student work
- Moderation studies to establish reliability
- Extensive professional development
- Predictive validity based on graduates’ college success

Additional components include an emphasis on:

- Inquiry-based teaching and learning
- Discussion-based classrooms

Years before the Common Core State Standards were promulgated, Consortium schools had developed a culture focused on deeper learning skills. Freed of the pressures to “teach to the test,” Consortium teachers developed a multi-layered, student-focused curriculum, in addition to and beyond the assessment tasks. Not only assessment but instruction, too, reflects the values of the Common Core: open-ended questioning; intensive reading, writing, and discussion; student input; and assignments extended over longer periods of time than the more conventional standardized approach to assessment and instruction.

Time and Space to Innovate

The Consortium has been able to thrive in New York because the state provided it with time and a “safe space” to innovate, develop, and refine its system. Over the past dozen years, while we have witnessed the serious shortcomings of large-scale assessment systems imposed on teachers and classrooms “from above,” the Consortium system—teacher-designed and flourishing at the school and local levels—has nurtured a committed cadre of practitioners who believe in the system and have devoted years of work to grow it and refine it.
The Consortium includes a range of schools, from transfer schools (or “second-chance” schools) to schools in the International Network to Title One schools and schools with both the urban poor and the urban middle class. All types of schools and students have benefitted, including schools with large populations of students with IEPs, who have successfully earned diplomas. Recently, the organization Advocates for Children, in their proposal for “multiple pathways to a diploma” in NY State, has supported expanding the NY Performance Standards Consortium so that more students with special needs would have access to other options for demonstrating college and career readiness.

Multiple Outcomes of NY Performance Standards Consortium

The Consortium approach produces far better outcomes when compared with state and national data. While standardized assessments limit targeted outcomes to grades on standardized exams, the Consortium broadens the definition of outcomes by looking at:

- Graduation Rates and College Readiness
- ELLs and Special Needs
- Predictive Validity and College Persistence
- Minority Male College Data
- Suspension Data
- Teacher Turnover Data

Graduation Rates and College Readiness

The results for Consortium graduates have been far-reaching and positive. The Consortium graduation rate exceeds that of the overall NYC public schools (see Chart 1). And a study conducted by Dr. Martha Foote (“Keeping Accountability Systems Accountable,” Phi Beta Kappan, January 2007) shows that the Consortium has “a proven record of producing graduates who go on to successful undergraduate careers.” Eighty-five percent of Consortium graduates attended colleges rated competitive or better according to Barron’s Profiles of American Colleges and persisted in college at rates higher than the national average. All this was accomplished despite the fact that the Consortium schools’ pool of students include more students living at the poverty level, a higher percentage of Latinos and English Language learners, and a higher percentage of students with lower English and math skills than the overall NYC public high school population (see Chart 1).
ELLs and Students with Special Needs

An ongoing study of ELL students in the ten established NYC International Network schools found that the three International schools within the Consortium scored better on their ELA Regents exams than those students in international schools that are not in the Consortium.

Also, the Consortium has developed a list of accommodations to meet the needs of students with IEPs so that they can benefit from the PBA system even though it poses a greater academic challenge than the standardized exams. As a result, the graduation rate of Consortium special ed students exceeds that of special ed students in the general NYC public school population (see Chart 1).

<table>
<thead>
<tr>
<th>Chart 1: Comparison of Consortium and NYC Public High School Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consortium</strong></td>
</tr>
<tr>
<td>% Black &amp; Hispanic</td>
</tr>
<tr>
<td>% ELLs</td>
</tr>
<tr>
<td>% Students w/ special needs</td>
</tr>
<tr>
<td>% Students in poverty*</td>
</tr>
<tr>
<td>Average 8th grade proficiency (out of 4.50)</td>
</tr>
<tr>
<td>4-Year Graduation Rate (based on 2 or more years of enrollment)</td>
</tr>
<tr>
<td>5-Year Graduation Rate (based on 2 or more years of enrollment)</td>
</tr>
<tr>
<td>Dropout Rate</td>
</tr>
<tr>
<td>Black Graduation Rate</td>
</tr>
<tr>
<td>Hispanic Graduation Rate</td>
</tr>
<tr>
<td>Asian Graduation Rate</td>
</tr>
<tr>
<td>White Graduation Rate</td>
</tr>
<tr>
<td>ELL Graduation Rate</td>
</tr>
<tr>
<td>Students w/ special needs Graduation Rate</td>
</tr>
</tbody>
</table>

* Defined as qualifying for free or reduced lunch

Predictive Validity and College Persistence

The performance-based assessment tasks (PBATs), which have become the basis of the Consortium’s assessment work, reflect the complexity of learning that Conley refers to in his seminal work on college readiness ("Toward a More Comprehensive Conception of College Readiness," 2007): analyzing conflicting phenomena, supporting arguments with evidence, solving complex problems that have no obvious answer, and thinking deeply about what is being taught. These are the specific skills that Tony Wagner has argued are needed to prepare students for the 21st century ("Rigor Redefined," 2008).

National Student Clearinghouse data confirm that the Consortium schools are preparing students to succeed post-graduation. A recent report on the Consortium’s graduating class of 2008 documents results that far exceed national, state, and city norms. The rates for sustainability are remarkable, particularly for Consortium students attending two-year colleges (see Charts 2 and 3).

**Chart 2: Persistence in College: 2nd Year Comparison Between Consortium, National and NYS Rates, Class of 2008**

Minority Male College Data

In this category, too, the Consortium rates show much more positive results than comparable populations.

Chart 3: Consortium CUNY Persistence, 2\textsuperscript{nd} year

- 85\% - Percent of students in a 4-year CUNY school, either graduated or remaining in (any) college, post 01/01/2011
- 67\% - Percent of students in a 2-year CUNY school, either graduated or remaining in (any) college, post 01/1/2011

Consortium data based on National Student Clearinghouse, Feb. 2012

Chart 4: Minority Male College Acceptance Rates, 2011

- 86\% of African-American male Consortium graduates accepted to college, 2011
- 90\% of Latino male Consortium graduates accepted to college, 2011

Data based on college acceptances.

For comparison purposes: The American Council on Education report “Gender Equity In Higher Education: 2010” cites the following national percentages:

- 37\% of African-American male graduates going to college
- 42\% of Latino male graduates going to college

(http://www.acenet.edu/AM/Template.cfm?Section=Press_Releases2&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=35338)
Suspension Data

The Consortium has lower suspension rates than other NYC high schools.

Chart 5: Suspension Rate

Data were compiled from the 2009-2010 NYSED individual state report cards for schools in each grouping. New York City schools’ suspension rate is based on NYC DoE data reported for 2010-11.

Teacher Turnover Data

The Consortium has lower teacher turnover rates than other groups of NYC public schools.

Chart 6: Teacher Turnover Rates for teachers with less than 5 years’ experience

Data were compiled from the 2009-2010 NYSED individual state report cards for schools in each grouping. New York City high schools’ teacher turnover rate is found in The Research Alliance for New York City School report The Middle School Teacher Turnover Project: A Descriptive Analysis of Teacher Turnover in New York City’s Middle Schools (February 2011).
Citations of Consortium Success (selected)

American Educational Research Association (2011, April). Authentic Pedagogy: Examining Intellectual Challenge in a National Sample of Social Studies Classrooms. Best Paper Award. Researchers in a multi-state study of social studies classrooms found high levels of authentic intellectual work only in the Consortium schools, crediting the Consortium’s variance from the state tests for teachers’ ability to delve deeply with students.

Foote, M. (2007). Keeping accountability systems accountable. Phi Delta Kappan, 88(5), 359-363. Dr. Foote’s study indicates that despite serving a more disadvantaged student population than NYC high schools in general, Consortium schools have much higher graduation rates, plus their students do well in college and persist at a rate better than the national average.

Foote, M. (2012). Freedom from high-stakes testing: A formula for small school success. In Critical small schools (Charlotte, NC: Information Age Publishing). Dr. Foote discusses how Consortium schools, freed from state testing mandates, prepare their students for college by teaching them how to write papers, develop and defend theses, construct arguments, and do oral presentations.


Teacher to Teacher Publications (New York: Teachers College Press). A series of books and DVDs published by the Consortium, providing a valuable and practical resource for the classroom teacher.

  - Back to the books: Creating a literacy culture in your school (2010)
  - Inquiry in action: Teaching Columbus (2006)
  - Inquiry teaching in the sciences (2004)
  - Serving the community: Guidelines for setting up a service program (2006)


Wagner, T. (2008). The global achievement gap: Why even our best schools don’t teach the new survival skills our children need – and what we can do about it (New York: Basic Books). The author, a Harvard education professor, cites the Consortium for its outstanding assessment and accountability systems that ensure students learn the skills they need to survive in the 21st century.

The Tasks

Performance-based Assessment Tasks (PBATs):
Multiple ways to express learning

All Consortium schools require students to complete academic tasks to demonstrate college and career readiness and to qualify for graduation. Topics emerge from class readings and discussion. In some classes, the tasks are crafted by the teacher and in other instances by the student. Thus, each semester different questions may be developed. All graduation level tasks are evaluated using the Consortium rubrics.

Literature Task

The student will write a well-developed literary analysis, using a text of appropriate complexity and showing connections between the text and other substantial issues, such as a larger issue or theme, another work of literature, the historical or biographical context, a filmed version of the text, or noted works of relevant criticism.

The paper is organized around a compelling argument and thesis, uses relevant evidence and quotations that support the argument, and provides meaningful interpretation of texts. In addition to demonstrating accepted conventions for writing, the paper also has evidence of a student’s voice and style.

Each student also presents orally, either defending the paper or by demonstrating ability to adapt skills to a new text, which the student has read independently.

External evaluators assess both written and oral work using the Consortium rubric.

Sample Literature PBATs:

- Who is an American? Does the American dream change depending upon the identity of the dreamer? What qualifies as a triumph or a failure? Who emerges heroic and who allows the pursuit of the dream to turn him villainous? Use two of the novels we’ve read this semester to explore these questions.

- In his essay, “An Image of Africa: Racism in Conrad’s Heart of Darkness,” Chinua Achebe argues that Conrad is a “bloody racist.” Based on the ideas made explicit in his essay and those implicit in Conrad’s novel, do you agree or disagree with Achebe’s argument? Is the real monster in Heart of Darkness Conrad himself? Or did Achebe misconstrue Conrad’s intentions, which were to expose the evils of colonialism?

- The conflict between moral law and state law in Antigone and A View From the Bridge

- The role of gender in the tragedies of Othello and Antigone
Math Task

The math PBAT is built around problem solving and applications of higher levels of mathematics.

The student is expected to use sound mathematical procedures accurately when solving problems; justify all mathematical statements efficiently and accurately; and create appropriate models, inherent to the task, that represent the problem accurately and elegantly.

Communication is an important aspect of the mathematical task. Students are expected to use mathematical terminology and notation, communicate clearly the process and solution used, and make predictions. Students will also discuss how mathematical concepts interconnect, build on each other, and apply to real-world situations.

External evaluators assess both written and oral work using the Consortium rubric.

Sample Math PBATs:

- Texas Tech -vs- Oklahoma: A comparative statistical analysis that exhibits how data can be manipulated to convey a variety of messages.
- Plinko: Students design their own Plinko board, then use Pascal’s Theory to compare their empirical data against expected outcome data.
- How can matrices be used to solve multivariable mathematical situations?
- How can the properties of parabolas be employed in producing solar energy?
- What equations can be used for parabolic solar panels?

Social Studies Task

The social studies task requires students to develop a text-based research and analytical paper in history or the social sciences. The paper consists of an argument organized around an idea, thesis or question and is supported by accurate and persuasive evidence from both primary and secondary sources. Alternative points of view are presented, explained, and analyzed. In addition to demonstrating accepted conventions of standard English, the paper is also expected to show evidence of a student’s voice and writing style.

External evaluators assess both written and oral work using the Consortium rubric.

Sample Social Studies PBATs:

- Why did Lincoln support abolition? Did his views change over time, and why?
- Looking Abroad—France and the headscarf ban in public schools.
- How has France defined national identity in comparison with the U.S.? What conflicts have arisen when different cultures meet? How is multiculturalism defined or restricted? Discuss what can be learned from this case study about our own society.
- Why did the United States lose the Vietnam War? Consider the role of the American media, the anti-war movement, and the Pentagon Papers.
- The Stimulus Package: Is this the decline of the American Dream? An in-depth investigation of one aspect of the Recovery Act of 2009, including funding sources, allocations, and arguments for and against the legislation.
- What are the connections between population trends and immigration laws? Analyzing U.S. Census statistics for race, language, income, education, and other basic demographic indicators, nationally and for NYC.
Science Task

The science task is an extended science project or original experiment that grows out of research studied in class. Students contextualize and develop the hypothesis, develop the design for carrying out their research, and collect data consistent with the problem. Necessary charts, tables, and graphs are generated to facilitate analysis of the data and interpretation of the results. Finally, the students suggest revisions for the experimental plan and questions for future research.

External evaluators assess both written and oral work using the Consortium rubric.

Sample Science PBATs:

- How do particle size and density influence the erosion of beach sand? What are the alternatives to beach replenishment?
- Mitochondrial DNA Project: Student researches origin of modern humans, exploring both the Multi-Regional and Out of Africa theories, creates hypothesis, then analyzes own mitochondrial DNA sequences to determine if the data support the hypothesis.
- Which digestive system is the most effective: A comparison of fetal pig, human, and cow digestive systems.

Supplementary Tasks

In addition to the four required academic tasks, schools may choose to include supplementary tasks. Below are a few of the tasks that individual schools have chosen to include among their curricular and graduation requirements.

The Arts

Extensive work in one of the arts and public presentation of accomplishments. Includes visual arts, music, playwriting, theater, ceramics, poetry, fiction writing. Visiting artists provide critiques and feedback.

Arts Criticism

Using the resources available in the city, students visit galleries and museums, choose an artist to study in-depth, develop and conduct interviews of those active in the arts, and present to students and others.

Internships

In-depth internship over a significant amount of time at an organization—private or public—or with an individual practitioner in an area of concern and interest to the student. Followed by a presentation to students and others.

Foreign Language

Students learn a language other than English and develop comfort and fluency in the language.
Rubrics

Rubrics provide the basis on which to review the quality of student work across four performance tasks: the analytic essay, social studies research paper, science experiment and applied mathematics.

<table>
<thead>
<tr>
<th>New York Performance Standards Consortium</th>
<th>Performance Assessment: Literary Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circle One: Written</td>
<td>Title/Texts ________________________________</td>
</tr>
<tr>
<td>Circle One: Oral</td>
<td>(Print name) ________________________________</td>
</tr>
<tr>
<td>Circle One: Teacher</td>
<td>Signature ________________________________</td>
</tr>
<tr>
<td>Circle One: External Evaluator</td>
<td>Date ________________________________</td>
</tr>
<tr>
<td>Overall Evaluation</td>
<td>________________________________</td>
</tr>
<tr>
<td></td>
<td>________________________________</td>
</tr>
</tbody>
</table>

**Performance Indicators**

<table>
<thead>
<tr>
<th>Component</th>
<th>Outstanding</th>
<th>Good</th>
<th>Competent</th>
<th>Needs Revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thesis and organization</td>
<td>• Efficiently organizes paper around a clear, compelling argument</td>
<td>• Has a clear argument</td>
<td>• Has a central idea</td>
<td>• Lacks a central idea</td>
</tr>
<tr>
<td></td>
<td>• Develops argument thoughtfully and persuasively</td>
<td>• Effectively organized and developed coherently around central argument</td>
<td>• Mostly organized around a central idea, but may lose focus at times</td>
<td>• Unfocused organization</td>
</tr>
<tr>
<td></td>
<td>• Uses relevant, convincing evidence and quotations that thoroughly support argument</td>
<td>• Uses relevant evidence &amp; quotations that support central argument</td>
<td>• Uses relevant evidence and quotations to support central idea</td>
<td>• Little, irrelevant, or no evidence used</td>
</tr>
<tr>
<td>Analysis</td>
<td>• Provides deep insight and creates meaningful interpretation of texts</td>
<td>• Creates meaningful interpretation of texts</td>
<td>• Provides basic interpretation of texts</td>
<td>• Summarizes or uses faulty analysis</td>
</tr>
<tr>
<td></td>
<td>• Elaborates on central argument and meaning of supporting evidence; answers question, So what?</td>
<td>• Explores central argument and meaning of supporting evidence; answers question, So what?</td>
<td>• Develops central idea and explains choice of evidence and quotations</td>
<td>• Little or no interpretation of texts</td>
</tr>
<tr>
<td>Style and voice</td>
<td>• Evidence of ambition, passion for subject, or deep curiosity</td>
<td>• Evidence of a mind at work</td>
<td>• Communicates ideas clearly</td>
<td>• Relies on conversational language</td>
</tr>
<tr>
<td></td>
<td>• Writer willing to take risks</td>
<td>• Evidence of interest in topic</td>
<td>• Communicates ideas clearly</td>
<td>• Little or no evidence of formal language and word choice</td>
</tr>
<tr>
<td></td>
<td>• Displays intellectual engagement</td>
<td>• Makes appropriate connection between text and something outside the text</td>
<td>• Shows some awareness of appropriate language and word choice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Creative, clear, and appropriate use of language and word choice</td>
<td>• Establishes a connection between text and something outside the text</td>
<td>• Relies on conversational language</td>
<td></td>
</tr>
<tr>
<td>Connections</td>
<td>Makes insightful connection between text and something outside the text:</td>
<td>Makes appropriate connection between text and something outside the text</td>
<td>Inappropriate or no connection made between the text and something outside the text</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Another work of literature or Biographical context or Larger issue or theme of importance (must be supported with relevant evidence) or Film version of text, or Substantial criticism</td>
<td>Makes appropriate connection between text and something outside the text</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conventions (for writing assignment only)</td>
<td>Mechanical and grammatical errors are rare or non-existent; follows accepted conventions of quotations and citations; uses transitions effectively</td>
<td>Few mechanical or grammatical errors; follows accepted conventions of quotations and citations; makes some use of transitions</td>
<td>Some mechanical or grammatical errors but communication is not impaired; demonstrates knowledge of accepted conventions of quotations</td>
<td>Communication is impaired by errors; little or no use of conventions or quotation and citation; shows little awareness of appropriate use of transitions</td>
</tr>
<tr>
<td>Presentation (for oral component only)</td>
<td>Communicates ideas clearly in appropriate, sophisticated, and original way to audience; able to respond to questions and expand on ideas; presents complex, accurate, substantive ideas and information clearly</td>
<td>Communicates clearly in appropriate way to audience; able to respond accurately to questions; presents some substantive ideas and information clearly</td>
<td>Communicates clearly in appropriate way to audience; able to respond accurately to questions; presents some substantive ideas and information clearly</td>
<td>Neither clear nor appropriate presentation to audience; cannot respond well to questions; does not present accurate or substantive ideas or information</td>
</tr>
</tbody>
</table>
### New York Performance Standards Consortium

**Student**

---

**Performance Assessment:** Mathematics

**Project Title** (e.g., Mathematical Modeling, The Can Project)

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**Project Topic** (e.g., Linear programming, volume-surface area optimization)

---

**Teacher or External Evaluator** (circle one)  

---

**Date**  

---

**Overall evaluation**  

---

**Signature**  

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### Performance Indicators

<table>
<thead>
<tr>
<th></th>
<th>Outstanding</th>
<th>Good</th>
<th>Competent</th>
<th>Needs Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Problem Solving</strong></td>
<td>Selects appropriate and efficient strategies to solve non-routine problems.</td>
<td>Selects appropriate and efficient strategies to solve non-routine problems.</td>
<td>Selects appropriate, but inefficient, strategies, and executes conceptually sound mathematical procedures with minor computational errors.</td>
<td>Selects an inappropriate strategy. or Makes major conceptual errors or procedural errors.</td>
</tr>
<tr>
<td></td>
<td>Executes conceptually sound mathematical procedures accurately.</td>
<td>Executes conceptually sound mathematical procedures with minor computational errors.</td>
<td>or Selects appropriate and efficient strategies but executes mathematical procedures with minor conceptual and computational errors.</td>
<td></td>
</tr>
<tr>
<td><strong>Reasoning and Proof</strong></td>
<td>Justifies all mathematical statements in an efficient and accurate manner, and draws valid conclusions.</td>
<td>Justifies most mathematical statements accurately, and draws valid conclusions.</td>
<td>Justifies some of the mathematical statements accurately, and draws valid conclusions.</td>
<td>Does not justify mathematical statements accurately, and does not draw valid conclusions.</td>
</tr>
<tr>
<td></td>
<td>Constructs, uses, and tests one or more generalizations, and makes predictions.</td>
<td>Constructs a generalization and uses it to make predictions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>Always uses mathematical terminology and notation appropriately.</td>
<td>Mostly uses mathematical terminology and notation appropriately.</td>
<td>Limited use of appropriate mathematical language and notation.</td>
<td>Little or no use of mathematical language and notation. Little or no coherent explanation of process and solution.</td>
</tr>
<tr>
<td></td>
<td>Writing is sophisticated and interesting to read.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Connections</strong></td>
<td>Discusses, in depth, how mathematical concepts interconnect and build on each other.</td>
<td>Discusses how math concepts interconnect and build on each other.</td>
<td>Discusses superficially how math concepts interconnect and build on each other.</td>
<td>Does not discuss the interconnection between concepts. Does not attempt to apply concepts to real-world situations.</td>
</tr>
<tr>
<td></td>
<td>Thoroughly applies concepts to real-world situations.</td>
<td>Applies concepts to real-world situations.</td>
<td>Attempts to apply concepts to real-world situations.</td>
<td></td>
</tr>
<tr>
<td><strong>Representation</strong></td>
<td>Creates appropriate models, inherent to the task, that represent the problem accurately and elegantly.</td>
<td>Creates appropriate models, inherent to the task, that represent the problem accurately.</td>
<td>Creates appropriate models, inherent to the task, that represent the problem with minor errors.</td>
<td>Creates appropriate models, inherent to the task.</td>
</tr>
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</tbody>
</table>
### New York Performance Standards Consortium

**Extended Science Project or Original Experiment**

Circle one: **Teacher or External Evaluator**

**Title of Experiment**

**Circle one: Holistic evaluation**

**Date**

<table>
<thead>
<tr>
<th>Performance Indicator</th>
<th>Outstanding</th>
<th>Good</th>
<th>Competent</th>
<th>Needs Revision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contextualize</strong></td>
<td>Background research has been thoroughly conducted using at least two original sources. Sources are all appropriately cited. The significance of the problem is clearly stated. The hypotheses/theses are grounded in the background research.</td>
<td>Background research has been thoroughly conducted. Sources are appropriately cited. The significance of the problem is stated. The hypotheses/theses are relevant to the background research.</td>
<td>Background research is included in the introduction. Sources are cited. The significance of the problem is stated. The hypotheses/theses are clearly stated.</td>
<td>Background research is not included in the introduction. Sources are not cited. The significance of the problem is not stated. The hypotheses/theses are not stated.</td>
</tr>
<tr>
<td><strong>Critique Experimental Design</strong></td>
<td>Identifies, describes and controls all relevant variables. Thoughtfully evaluates the procedure and/or set up. Clearly describes bias in the design.</td>
<td>Identifies, describes and controls most relevant variables. Evaluates the procedure and/or set up. Clearly describes bias in the design.</td>
<td>Identifies, describes and controls some relevant variables. Evaluates the procedure and/or set up. Attempts to describe bias in the design.</td>
<td>Does not identify, describe or control any variables. Does not evaluate the procedure and/or set up. Does not attempt to describe bias in the design.</td>
</tr>
<tr>
<td><strong>Collect, Organize and Present Data</strong></td>
<td>Collects data in a reliable and valid manner. Presents relevant data that is consistent with the problem. Generates appropriate tables, charts and graphs with data and makes appropriate calculations. Conducts thorough mathematical analysis of the data.</td>
<td>Collects data in a reliable and valid manner. Presents relevant data that is consistent with the problem. Generates appropriate tables, charts and graphs with data and makes appropriate calculations. Conducts thorough mathematical analysis of the data.</td>
<td>Collects data in a reliable and valid manner. Presents data that is consistent with the problem. Generates tables, charts and graphs with data. Conducts analysis of the data.</td>
<td>Collects data in a non-reliable and/or invalid manner. Does not present data or presents data that is not relevant to the problem. Does not generate tables, charts and graphs. Does not analyze the data.</td>
</tr>
<tr>
<td><strong>Analyze and Interpret Results</strong></td>
<td>Draws thoughtful conclusions that are supported by the data. Relates conclusions to original question. Thoroughly describes sources of error and their effects on the data.</td>
<td>Draws conclusions that are supported by the data. Relates conclusions to original question. Describes several sources of error and their effects on the data.</td>
<td>Draws conclusions that are partially supported by the data. Attempts to relate conclusions to original question. Describes sources of error and attempts to describe their effects on the data.</td>
<td>Draws no conclusions or draws conclusions that are not supported by the data. Does not describe sources of error or does not attempt to describe their effects on the data.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Performance Indicator</th>
<th>Outstanding</th>
<th>Good</th>
<th>Competent</th>
<th>Needs Revision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revise Original Design</strong></td>
<td>Proposes effective and relevant revisions for the experimental plan to lessen the effects of bias and sources of error. Poses thoughtful and relevant questions for future research.</td>
<td>Proposes relevant revisions for the experimental plan to lessen the effects of bias and sources of error. Poses relevant questions for future research.</td>
<td>Proposes revisions for the experimental plan to lessen the effects of bias and sources of error. Poses questions for future research.</td>
<td>Does not propose revisions for the experimental plan. Does not pose questions for future research.</td>
</tr>
<tr>
<td><strong>Defense (for oral component only)</strong></td>
<td>Thoroughly answers questions relevant to the experiment and related topics.</td>
<td>Adequately answers questions relevant to the experiment and related topics.</td>
<td>Adequately answers questions relevant to the experiment.</td>
<td>Does not adequately answer questions relevant to the experiment.</td>
</tr>
<tr>
<td>Performance Indicators</td>
<td>Outstanding</td>
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<td>Competent</td>
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<td>------------------------</td>
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<tr>
<td><strong>Newspoint: Thesis/Claim</strong></td>
<td>Has sharply defined, compelling organizing idea, thesis or question.</td>
<td>Has clearly defined organizing idea, thesis or question.</td>
<td>Organizing thesis, ideas or question is comprehensible but not especially clear.</td>
<td>Organizing idea, thesis, or question is not clear.</td>
</tr>
<tr>
<td><strong>Evidence and Sources</strong></td>
<td>Supporting arguments include specific, relevant, accurate and verifiable, and highly persuasive evidence, drawn from both primary and secondary sources.</td>
<td>Supporting arguments include relevant, accurate and verifiable, and mostly persuasive evidence, drawn from both primary and secondary source.</td>
<td>Evidence for supporting arguments is accurate and verifiable, mostly specific and relevant, and generally persuasive.</td>
<td>Supporting arguments may include inaccurate evidence and lack clear, persuasive, or relevant evidence.</td>
</tr>
<tr>
<td></td>
<td>Uses quotations and paraphrasing appropriately to sustain an argument.</td>
<td>Uses quotations and paraphrasing appropriately to sustain an argument.</td>
<td>Use of quotations and paraphrasing is mostly evident.</td>
<td>Quotations and paraphrasing do not effectively support arguments.</td>
</tr>
<tr>
<td><strong>Analysis and Persuasion</strong></td>
<td>Argument draws on, explains, and critiques evidence from alternative points of view.</td>
<td>Argument draws on evidence from alternative points of view.</td>
<td>Some alternative arguments are presented but not always well integrated.</td>
<td>Evidence supporting alternative arguments is either missing or poorly integrated.</td>
</tr>
<tr>
<td></td>
<td>Clearly, thoughtfully, and thoroughly explains and analyzes the connection between all evidence and argument being made.</td>
<td>Mostly clear and thoughtful explanation or analysis of how the evidence presented supports each argument.</td>
<td>Some explanation of how the evidence presented supports each argument, but the explanations are not always clear and thorough.</td>
<td>No explanation or analysis of how or why the evidence supports each argument.</td>
</tr>
<tr>
<td><strong>Effective Organization</strong></td>
<td>Each argument clearly flows in support of an overall structure.</td>
<td>Each argument presented clearly supports the overall structure.</td>
<td>Most arguments presented clearly support the overall structure.</td>
<td>Arguments presented are not clearly or supportively connected to the overall structure.</td>
</tr>
<tr>
<td></td>
<td>Consistent, effective transitions develop ideas and arguments logically build to a compelling, persuasive conclusion.</td>
<td>Transitions are sometimes abrupt but the arguments and conclusion mostly connect.</td>
<td>Transitions between arguments are largely unclear.</td>
<td>Transitions between arguments are largely unclear.</td>
</tr>
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<td>Distinct conclusion summarizes arguments that support idea general thesis.</td>
<td>Distinct conclusion partly sustains the major arguments.</td>
<td>Conclusion represents major arguments and connects them to thesis; some synthesis.</td>
<td>Conclusion is either vague or unclear and poorly connected to the paper’s major arguments.</td>
</tr>
<tr>
<td><strong>Understanding of Implications and Context</strong></td>
<td>Arguments, ideas, and voice reflect a highly informed awareness of the larger historical, political, or cultural context surrounding questions addressed in the paper.</td>
<td>Arguments, ideas, and voice reflect a somewhat informed awareness of the larger historical, political, or cultural context surrounding questions addressed in the paper.</td>
<td>Arguments, ideas, and voice reflect a very general, somewhat less informed awareness of the larger historical, political, or cultural context surrounding questions addressed in the paper.</td>
<td>Arguments, ideas and voice reflect almost no awareness of the larger historical, political, or cultural context surrounding the questions addressed in the paper.</td>
</tr>
<tr>
<td></td>
<td>Broader implications of the central arguments are presented and thoroughly explored.</td>
<td>Some broader implications of the central argument is presented and explored.</td>
<td>The broader implications of the central arguments are alluded to but not necessarily explored.</td>
<td>The broader implications of the central argument are neither presented nor explored.</td>
</tr>
<tr>
<td><strong>Strong, Engaged Student Voice</strong></td>
<td>Confident, highly fluid writing style; lively, engaging, articulate language. Paper has distinct, individual voice that serves to develop and further the argument throughout.</td>
<td>Confident writing style; engaging, mostly articulate language. Paper has an individual voice that manifests itself at important points in the text.</td>
<td>Engaged but somewhat tentative or basic writing style.</td>
<td>Awkward, wooden, or confusing writing style; student voice is buried at best.</td>
</tr>
<tr>
<td><strong>Conventions (for writing task only)</strong></td>
<td>Grammar and punctuation nearly flawless.</td>
<td>Grammar and punctuation mostly correct.</td>
<td>Grammar and punctuation sometimes flawed, but not in a manner that undermines the clarity of the paper’s ideas.</td>
<td>Consistently defective grammar and punctuation.</td>
</tr>
<tr>
<td></td>
<td>Appropriate and consistent documentation of accessible sources (complete, well-organized bibliography and citations).</td>
<td>Appropriate and consistent documentation of accessible sources (complete, well-organized bibliography and citations).</td>
<td>Accessible, complete but somewhat imprecise bibliography and citations.</td>
<td>Inappropriate and/or mistaken documentation of sources (poorly organized, incomplete bibliography and citations).</td>
</tr>
<tr>
<td><strong>Presentation (for oral component only)</strong></td>
<td>Communicates clear understanding of the paper’s ideas and arguments in an appropriate, consistently sophisticated way that demonstrates ownership of work.</td>
<td>Communicates clear understanding of the paper’s ideas and arguments in an appropriate, sometimes sophisticated way that demonstrates ownership of work.</td>
<td>Communicates a mostly clear and basic understanding of the paper’s ideas and arguments in an appropriate, thoughtful though not necessarily sophisticated manner.</td>
<td>Fails to communicate a clear and basic understanding of the paper’s ideas and arguments in an appropriate, thoughtful manner.</td>
</tr>
<tr>
<td></td>
<td>Presentation and response to questions reflect the coherence and depth of the paper.</td>
<td>Presentation and response to questions reflect the coherence and depth of the paper.</td>
<td>Presentation and response to questions may not fully reflect the coherence and depth of the paper, but they are nevertheless clear and thoughtful.</td>
<td>Answers questions superficially, inappropriately, or incorrectly.</td>
</tr>
<tr>
<td></td>
<td>Answers questions accurately, thoughtfully, and effectively, developing new ideas when they are appropriate.</td>
<td>Answers questions accurately, thoughtfully, and effectively, developing new ideas when they are appropriate.</td>
<td>Answers questions are mostly accurate, thoughtful, and effective.</td>
<td>Answers questions superficially, inappropriately, or incorrectly.</td>
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</table>
Commentators from all parts of the political spectrum, from Newt Gingrich to President Obama, have identified education as the “civil rights issue of the 21st century.” For too many students of color and special needs students, schools have functioned as part of a “school-to-prison pipeline,” funneling students from the education system into the criminal and juvenile justice system. But in the midst of the bad news, comes the New York Performance Standards Consortium report “Educating for the 21st Century.” The Consortium illustrates how the education system can prepare all students to achieve their full potential and take their rightful place in society. Serving a population that mirrors the overall New York City high school student population in terms of race, ethnicity, special needs and poverty, high schools in the Consortium significantly outperform other schools. They graduate more students of every race and ethnicity as well as English Language Learners and special needs students at significantly higher rates than those of other city schools, and their graduates persevere once they are in college. And all of this is achieved through the development and implementation of a student assessment system designed to foster innovative and meaningful learning rather than teaching to standardized, high-stakes tests. If only more schools were to follow their example, we would be taking a serious step toward addressing the serious disparities in our education system.

Dennis D. Parker  
Director  
Racial Justice Program  
American Civil Liberties Union

We have long known, and now the data confirm, that the New York Performance Standards Consortium has opened pathways to a high school diploma for English Language Learners and students with disabilities who would not otherwise have graduated. What is most impressive is that these schools have not dumbed-down their curriculum, but given a broad range of students alternative ways to show that they are meeting rigorous standards. And even with those high standards, the Consortium schools’ graduation rates are 25 to 30 percentage points higher than the overall city rate. That calls for celebration and protection of a valuable addition to New York’s public school options.

Kim Sweet  
Executive Director  
Advocates for Children