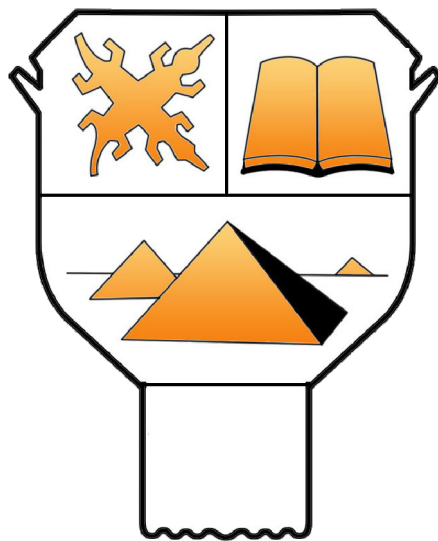


**The Common Core Promise:  
A Baseline Assessment of New York City's  
Implementation of  
Common Core State Learning Standard**



National Urban Research Group

## I. Introduction

The National Urban Research Group conducted a baseline evaluation of New York City’s large-scale implementation of Common Core Learning Standards (Common Core). As an early adopter, New York State is the second, only behind Kentucky, to administer standardized grade-level assessments aligned to the Common Core.<sup>1</sup> On August 7, 2013, the New York State Education Department (NYSED) released the results from the first mathematical standardized test explicitly aligned to the Common Core expectations for “college-and career readiness.” The data from the test revealed that New York City math proficient rates dwindled.<sup>2</sup> Education Department officials quickly advised that, the decline in proficiency rates “did not reflect a drop in performance, but rather a rising of standards.” In other words, the Common Core effectively created “a new baseline of student learning.”<sup>3</sup> Due to the controversy over declining student test scores, noteworthy Common Core math proficiency gaps received less attention. The National Urban Research Group utilizes data from 198,556 students in New York City Public Middle Schools who were administered the Common Core math assessment to address the following questions:

1. To what extent, if any, were *Common Core math proficiency gaps* attributable to differences between racial and ethnic subgroups?
2. To what extent, if any, were *Common Core proficiency gaps* attributable to differences in the racial composition of an individual school?
3. To what extent, if any, were *Common Core math proficiency gaps* attributable to differences within the five boroughs of New York City?
4. To what extent, if any, were *Common Core math proficiency gaps* attributable to variations in Community School Districts?
5. To what extent, if any, were *Common Core proficiency gaps* attributable to differences between traditional and charter middle schools?

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<sup>1</sup> NYSED awarded Pearson, the London-based global education firm, a five-year \$32 million contract that includes development and administration of grade 3-8 ELA and mathematics Common Core aligned assessments. For a review of assessment design approach see, *Considerations for Developing Test Specification for Common Core Standards*, available at, [http://images.pearsonassessments.com/images/tmrs/tmrs\\_rg/Common\\_Core\\_Test\\_Specifications12-01-10.pdf](http://images.pearsonassessments.com/images/tmrs/tmrs_rg/Common_Core_Test_Specifications12-01-10.pdf)

<sup>2</sup> New York Times, Test scores Drop under Tougher Standards, August 7, 2013, available at [http://www.nytimes.com/interactive/2013/08/08/nyregion/test-scores-drop-under-tougher-standards.html?\\_r=0](http://www.nytimes.com/interactive/2013/08/08/nyregion/test-scores-drop-under-tougher-standards.html?_r=0)

<sup>3</sup> New York State Department of Education Release Grade 3-8 Assessment Results, available at <http://www.oms.nysed.gov/press/grades-3-8-assessment-results-2013.html>

After a brief description of the New York State Common Core Mathematics Learning Standards, this analysis will specify *Common Core proficiency gaps*, across individual racial subgroups, racial composition of individual middle schools, disparities within the five boroughs of New York City, distinctions by Community School Districts, and differences between traditional and charter middle schools.

## II. New York Common Core State Standards for Middle School Mathematics

In 2004, Achieve Inc., a bipartisan non-profit organization created by the nation's governors and business leaders, released the notable report, *Ready or Not: Creating a High School Education That Counts*. This report delineated "a common core of English and mathematics academic knowledge and skills, or 'benchmarks', that American high school graduates need for success in college and the workforce."<sup>4</sup> A 2007 National Research Council report, commissioned by the James B. Hunt Jr. Foundation, revised a dormant national dialogue for K-12 "common standards."<sup>5</sup> The National Governors Association and Council of Chief State School Officers advanced this discussion by calling for the adoption of "a common core of internationally benchmarked standards in math and language arts for grades K-12."<sup>6</sup> Common Core expansion came about when Congress passed the American Recovery and Reinvestment Act of 2009 (ARRA). The Obama Administration set aside \$4.35 billion of ARRA money for the *Race to the Top Fund (Race to the Top)*.

The *Race to the Top* competition awarded up to 70 points, out of a total of 500 points, for states developing and adopting "a common set of high-quality standards" (40 points). Participation in a consortium "working towards jointly developing and adopting a common set of K-12 standards that are supported by evidence that they are internationally benchmarked and build toward college and career readiness by the time of high school graduation" (20 points). States that are "working toward jointly developing and implementing common high-quality assessments aligned with the consortium's set of K-12 standards," (10 points).<sup>7</sup>

On August 24, 2010, the U.S. Department of Education awarded New York State nearly \$700 million in *Race to the Top* funds. New York State joined the multistate Partnership for Assessment of Readiness for College and Careers (PARCC) consortium.<sup>8</sup> This state-driven endeavor led the way to the New York Board of Regents embrace of Common Core State Learning Standards (NYS P-12 Common Learning Standards). The New York City Department of Education, the largest school system in the country, issued several *Citywide Instructional Expectations* as part of its district-wide transition to implementation of the NYS P-12 Common

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<sup>4</sup> Achieve Inc, *Ready or Not: Creating a High School Education That Counts*, available <http://www.achieve.org/ReadyorNot>

<sup>5</sup> National Research Council. *Common Standards for K-12 Education? Considering the Evidence: Summary of Workshop Series*, available at [http://www.nap.edu/catalog.php?record\\_id=12462](http://www.nap.edu/catalog.php?record_id=12462)

<sup>6</sup> National Governors' Association, Council of Chief State School Officers, and Achieve, Inc. *Benchmarking for success: Ensuring U.S. students receive a world-class education*, available at <http://www.achieve.org/files/BenchmarkingforSuccess.pdf>

<sup>7</sup> *Race to the Top (Executive Summary)* available at, <http://www2.ed.gov/programs/racetothetop/executive-summary.pdf>

<sup>8</sup> For discussion see, <http://www.p12.nysed.gov/assessment/math/cmath/parccmcf.pdf>

Learning Standards.<sup>9</sup> One of the utmost concerns addressed middle school mathematics. Over the years, the term “a mile wide and an inch deep” has come to describe the teaching of middle school mathematics in New York City and across the country. The education system does a better job teaching mathematics to students from kindergarten through fourth grade than from fifth grade through eighth grade as documented in the Third International Mathematics and Science Study—“TIMSS.”<sup>10</sup> According to the 2012 Program for International Student Assessment (PISA), U.S. 15 year old students were average in reading and science, but below average in math compared to 64 other countries.<sup>11</sup>

New York Common Core State Standards for Mathematics identifies six major shifts in middle school math instruction.<sup>12</sup> First, the standards advance the notion of *focus*: Teachers “*focus deeply on only the concepts that are prioritized in the standards so that students reach strong foundational knowledge and deep conceptual understanding and are able to transfer mathematical skills and understanding across concepts and grades.*”<sup>13</sup> This inquiry- based approach favors “student talk” over “teacher talk” and small group discussion where the teacher is facilitator of learning rather than classroom lectures where the teacher is the primary source of knowledge. A second instructional shift, Common Core *coherence* puts emphasis on showing the vertical linkage of math concepts from one grade to the next building through a logical progression where “*each standard is not a new event, but an extension of previous learning.*”<sup>14</sup> The concept for algebraic thinking in Grade 6, for example, extends previous understandings of arithmetic to algebraic expressions. Students in Grade 7 are then required to apply these concepts by solving mathematical problems using numerical and algebraic expressions and equations. This early middle school exposure to algebraic concepts provides a strong foundation for student success in the revised and more rigorous Common Core Grade 8 math.

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<sup>9</sup> see, NYC Department of Education, *Citywide Instructional Expectations* available at <http://schools.nyc.gov/Academics/CommonCoreLibrary/About/InstructionalExpectations/default.htm>

<sup>10</sup> See, *Mathematics Achievement of Fourth-and-Eighth-Graders in Trends in International Mathematics and Science Study in 2011*, available at [http://nces.ed.gov/timss/results11\\_science11.asp](http://nces.ed.gov/timss/results11_science11.asp)

<sup>11</sup> The U.S. average math score was 481, which was lower than the OECD average of 494, 119 percentage points below top ranked Shanghai-China, lower than 29 education systems, higher than 26 education systems, and not measurable different than 9 education systems, see U.S. National Center for Education Statistics, <http://nces.ed.gov/surveys/pisa/>

<sup>12</sup> New York State P-12 Common Core State Standards for Mathematics available at [http://www.p12.nysed.gov/ciai/common\\_core\\_standards/pdfdocs/nysp12cclsmath.pdf](http://www.p12.nysed.gov/ciai/common_core_standards/pdfdocs/nysp12cclsmath.pdf)

<sup>13</sup> Instructional Shifts for the Common Core Mathematics, available at <http://schools.nyc.gov/Academics/CommonCoreLibrary/About/InstructionalShifts/default.htm>

<sup>14</sup> Ibid

A third shift, *fluency*, expects students “to have speed and accuracy with simple calculations; teachers structure class time and/or homework time for students to memorize, through repetition, core functions such as multiplication tables so they are more able to understand and manipulate more complex concepts.” *Deep understanding*, the fourth shift, is a pedagogical approach firmly in the “problem-solving view of mathematics” rewarding a student’s ability to describe the best process for reaching the solution, not simply providing the correct answer. This learning standard repetitively includes an emphasis on “*understanding*.”

*“Asking a student to understand something means asking a teacher to assess whether the student has understood it. But what does mathematical understanding look like? One hallmark of mathematical understanding is the ability to justify, in a way appropriate to the student’s mathematical maturity, why a particular mathematical statement is true or where a mathematical rule comes from. There is a world of difference between a student who can summon a mnemonic device to expand a product such as  $(a + b)(x + y)$  and a student who can explain where the mnemonic device comes from.”*<sup>15</sup>

The fifth specific change to math teaching is *concept applications* where students “use math and choose the appropriate concept for application even when they are not prompted” and teachers provide “opportunities at all grade levels for students to apply math concepts in ‘real world’ situations.”<sup>16</sup> In the final Common Core instructional shift, *dual intensity*,

*Students are practicing and understanding. There is more than a balance between these two things in the classroom--both are occurring with intensity. Teachers create opportunities for students to participate in “drills” and make use of those skills through extended application of math concepts. The amount of time and energy spent practicing and understanding in learning environments is driven by the specific mathematical concept and therefore, varies throughout the given school year.*<sup>17</sup>

The introduction of algebraic concepts remains somewhat contentious. Up to the time of the Common Core, the syllabus of a typical middle school Algebra I classroom began with arithmetic (integers and fractions) and moved to simplifying of expressions (often referred to as Pre-Algebra), followed by solving of equations, then moving onto linear equations.<sup>18</sup> Student variations in math course assignments allegedly reflected distinctions in the student’s capacity to “do math work.” Some students were placed in a “college preparatory” curriculum, including Algebra I by the end of the eighth grade. Other students were placed in a more general curriculum

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<sup>15</sup> New York State P-12 Common Core State Standards for Mathematics, p.4

<sup>16</sup> Instructional Shifts for the Common Core Mathematics

<sup>17</sup> Ibid

<sup>18</sup> See, Chris Shore, Common Core Pathways: Redefining Algebra, available at <http://mathprojects.com/2013/06/06/common-core-pathways-redefining-algebra/>

with the expectation that they will acquire “basic math skills.” In a purposeful split with long-established instructional practices, the Common Core increases the rigor of Grade 8 math for all students by incorporating several algebraic concepts, such as a more comprehensive study of linear relationships and equations, a more formal treatment of functions, the exploration of irrational numbers, and geometry standards that relate graphing to algebra.<sup>19</sup> Common Core repositions Algebra I as an introductory high school math course.<sup>20</sup>

A *White Paper* released by Pioneer Institute and American Principles Project declared the Common Core inferior because middle school math learning standards include some, but not all, of Algebra I expectations. The report quotes the statements of a well-known detractor who outlines “major Common Core deficiencies” including “abandonment of the expectation that students take Algebra I in grade 8.”

*The Common Core will reverse this trend by firmly relocating Algebra I back to a grade 9 high-school course. This change means that, as a practical matter, the great majority of American students will not be able to reach calculus in high school. Among other consequences, far fewer students will be able to take and excel in Advanced Placement (AP) math courses.*<sup>21</sup>

Another antagonist, R. James Milgram, Stanford University Mathematic Professor Emeritus and member of the Common Core Mathematics Validation Committee, claims that the math standards are not “internationally benchmarked”:

*“Our students will be more than two years behind international expectations by grade 7. The top countries start algebra in grade 7 and geometry in grade 8 or 9. By the end of grade 9, their students have learned all of the material in a standard geometry course, all the material in a standard Algebra I course, and some of the most important material in a standard Algebra II course. This allows a huge percentage of them to finish calculus before graduating from high school.”<sup>22</sup>*

In a rebuttal, Common Core authors respond that learning standards,

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<sup>19</sup> The Grade 8 Common Core suggests that instructional time should focus on three critical areas: (1) formulating and reasoning about expressions and equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; (3) analyzing two-and-three dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem, *New York State P-12 Common Core State Standards for Mathematics*, p. 45-48

<sup>20</sup> For an excellence document comparing pre-Common Core and Common Core 8<sup>th</sup> grade mathematics see, Massachusetts Curriculum Framework for Mathematics, available at, <http://www.doe.mass.edu/candi/commoncore/?section=comparision>

<sup>21</sup> Emmett McGroarty and James Robbins, *Controlling Education From the Top: Why Common Core Is Bad for America*, A Pioneer Institute and American Principles Project White Paper, No. 87, May 2012., available at <http://truthinamericaneducation.com/resources/pioneer-institute-white-papers/>

<sup>22</sup> See, <http://parentsacrossamerica.org/james-milgram-on-the-new-core-curriculum-standards-in-math/>.

*...do accommodate and prepare students for Algebra in 8<sup>th</sup> grade, by including the prerequisites for this course in grades K-7: Students who master the K-7 material will be able to take Algebra in 8<sup>th</sup> grade.”<sup>23</sup>*

James Zimba, a lead author of the Common Core Mathematics Learning Standards, affirms that, *Common Core State Standards for Mathematics are a blueprint for a strong mathematical education. They do this by first erecting a focused, coherent staircase in grades K-8, and then in high school calling for students to learn the math they need for college.*<sup>24</sup> University of California Professor Hung-Hsi Wu, adds,

*Mathematics is by nature hierarchical. Every step is a preparation for the next one.” [Common Core] will undoubtedly be more challenging to all students because for the first time, students will be asked to master both procedural and conceptual knowledge and learn each topic in a logical progression.”<sup>25</sup>*

According to research conducted by the Silicon Valley Education Foundation (SVEF),

*“...the Common Core Algebra I is more rigorous than the previous course because many traditional Algebra I topics (about one-third) are covered in Common Core Grade 8...Further, the Common Core State Standards clearly position Algebra as a high school mathematics course. The standards also provide two possible approaches to teaching three years of high school math.”<sup>26</sup>*

A “compacted pathway” provides an accelerated route leading to Algebra I in Grade 8 and Common Core Geometry and Common Core Algebra II in Grade 9.<sup>27</sup> Alternative pathways steer students into advanced mathematics in high school, including Calculus. High school students could “double up” by enrolling in Common Core Geometry during the same year as Common Core Algebra I or Algebra II.<sup>28</sup> High school curriculums could also distribute Calculus

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<sup>23</sup> CCSS, *Myths vs. Facts: Myths About Common Core Standards*, available at <http://www.corestandards.org/assets/CoreFacts.pdf>

<sup>24</sup> See, James Zimba, Critics math doesn't add up, available at, <http://www.edexcellence.net/commentary/education-gadfly-daily/common-core-watch/2013/critics-math-doesnt-add-up.html>

<sup>25</sup> Hung-Hsi Wu, “To Accelerate, or Not,” The Huffington Post, available at [http://www.huffingtonpost.com/hunghsi-wu/math-education\\_b\\_1901299.html](http://www.huffingtonpost.com/hunghsi-wu/math-education_b_1901299.html)

<sup>26</sup> Silicon Valley Education Foundation, *Thoughts on Public Education (TOP-Ed), Analysis, Opinion, and Rumination on California Education Policy: Algebra I in the Common Core Era, March 2013*, p. 3, available at [http://www.svefoundation.org/svefoundation/files/AlgebraCommonCore\\_Perry.pdf](http://www.svefoundation.org/svefoundation/files/AlgebraCommonCore_Perry.pdf) and Grade 8 Algebra and the Common Core Standards: Getting the Facts Straight!, available at <http://svefoundation.org/svefoundation/whoware/CommonCoreVideo.php>

<sup>27</sup> For review of “compacted” middle school pathway see, *Common Core State Standards for Mathematics Appendix A: Designing High School Mathematics Courses Based on the Common Core State Standards*, available at <http://www.corestandards.org/the-standards>

<sup>28</sup> *ibid.*



prerequisites throughout an “Enhanced Pathway” allowing students to take Common Core Calculus without taking Common Core Pre-calculus.<sup>29</sup> Other elective “integrated pathways” cover topics in Advanced Statistics, Discrete Mathematics, Advanced Quantitative Reasoning, or courses designed for career technical programs of study.<sup>30</sup>

Finally, in a widely circulated observation of Common Core’s intrinsic value, William Schmidt, distinguished professor of education and statistics at Michigan State University, writes:

*The Common Core State Standards may finally give American students the high-quality standards they deserve...It is a waste of time to expose children to content they are not prepared for, and it is counterproductive to skim over dozens of disconnected topics every year with no regard for student mastery. As it stands today, we simply hope that students will somehow “get it” at a later grade, and yet we know far too many students never do...The common core math standards closely mirror those of the world’s highest-achieving nations... The essential question is not whether the common core can improve mathematics learning in the United States, but whether we, as a nation, have the commitment to ensure that it does.<sup>31</sup>*

Closely knotted to the Common Core are commitments to modify the Annual Professional Performance Review (APPR) holding principals and teachers accountable for student performance. Under revisions to New York State Education Law 3012-c, Common Core student proficient rates will account for at least twenty percent of principal and teacher evaluation ratings.<sup>32</sup> According to state officials,

*...the purpose of the evaluation system is not to create a 'gotcha' environment. The goal is to improve teaching and learning by targeting professional development to make sure every student receives quality instruction. We want to highlight and reward excellence, ensure those who are struggling receive the support they need, and provide continuous feedback to all educators.<sup>33</sup>*

In an open letter to parents, a coalition of school building principals expressed their concerns regarding revision to the APPR:

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<sup>29</sup> The Massachusetts Curriculum Framework for Mathematics provides an example of the high school “Enhanced Pathway,” available at, [www.doe.mass.edu/candi/commoncore/](http://www.doe.mass.edu/candi/commoncore/)

<sup>30</sup> For explanation of “integrated pathways” see, Silicon Valley Education Foundation, *Algebra I in the Common Core Era*, Figure 2, p. 3., available at [http://www.svefoundation.org/svefoundation/files/AlgebraCommonCore\\_Perry.pdf](http://www.svefoundation.org/svefoundation/files/AlgebraCommonCore_Perry.pdf)

<sup>31</sup> William Schmidt, “Seizing the Moment for Mathematics,” Education Week, available at <http://www.edweek.org/ew/articles/2012/07/18/36schmidt.h31.html>

<sup>32</sup> See NYSED, Commissioner King Announces Preliminary Statewide Evaluation Ratings, October 22, 2013, available at <http://www.oms.nysed.gov/press/commissioner-king-announces-preliminary-statewide-evaluation-ratings.html>

<sup>33</sup> See, March 2013 Memo from Ken Slentz, Deputy Commissioner, Office of P-12 Education, on Implementation of the Common Core Learning Standards, available at, [http://schools.nyc.gov/NR/ronlyres/9ADB1916-F1CF-431E-8C70-ED4B50BE2D55/141618/Field\\_MemoImp\\_of\\_CCLS.pdf](http://schools.nyc.gov/NR/ronlyres/9ADB1916-F1CF-431E-8C70-ED4B50BE2D55/141618/Field_MemoImp_of_CCLS.pdf)

*... We welcome accountability and continually strive to meet high standards. We want what is best for our students. We believe, however, that an unproven, expensive, and potentially harmful evaluation system is not the path to lasting school improvement. We must not lose sight of what matters most—the academic, social, and emotional growth of our students”<sup>34</sup>*

In a second open letter, the coalition of principals expressed apprehension about the enormity of the transition to the Common Core assessments.

*... You may have heard that teachers, administrators, and parents are questioning the validity of these tests. As dedicated administrators, we have carefully observed the testing process and have learned a great deal about these tests and their impact. We care deeply about your children and their learning and want to share with you what we know—and what we do not know—about these new state assessments... If your child scored poorly on the test, please make sure that he does not internalize feelings of failure. We believe that the failure was not on the part of our children, but rather with the officials of the New York State Education Department.<sup>35</sup>*

Joining this debate, the New York City United Federation of Teachers (UFT) passed a *Resolution Calling for a Moratorium of High-Stakes Consequences for State Tests*. The moratorium would allow the state to continue Common Core assessments but would *require that both the state and city pause in attaching to the test results any high-stakes consequences for students, teachers or schools.*<sup>36</sup> Most recently, the New York State United Teachers, the state’s largest teacher union, withdrew its support for the Common Core standards as “*implemented and interpreted*” until state education officials “*makes major course corrections to its failed implementation plan and supports a three-year moratorium on high-stakes consequences from standardized testing.*”<sup>37</sup>

New York State Education Commissioner John B. King repeatedly stated, *testing is an important part of the instructional cycle*. He writes:

*Although the work is complex, the vision is simple. The best preparation for student success is a great teacher providing great instruction. To make sure students get that great instruction, teachers, students, parents, and the public need feedback about student progress. State*

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<sup>34</sup> New York State Principals, *An Open Letter to Parents of Children throughout New York State Regarding New York State’s APPR Legislation for the Evaluation of Teachers and Principals*, available at, <http://www.newyorkprincipals.org/appr-paper>

<sup>35</sup> New York State Principals, *An Open Letter to Parents of Children throughout New York State Regarding Grade 3-8 Testing*, available at [http://scfeeney.files.wordpress.com/2013/11/anopenlettertonewyorkparents\\_21nov13.pdf](http://scfeeney.files.wordpress.com/2013/11/anopenlettertonewyorkparents_21nov13.pdf)

<sup>36</sup> United Federation of Teachers, *Resolution Calling for a Moratorium on High-Stakes Consequences for State test*, available at <http://www.uft.org/union-resolutions/resolution-calling-moratorium-high-stakes-consequences-state-tests>

<sup>37</sup> NYSUT Board approves “no confidence resolution,” available at, <https://www.nysut.org/news/2014/january/nysut-board-approves-no-confidence-resolution>

*assessments—which provide comparable results across classrooms, schools, and districts—are an important part of the feedback process.*<sup>38</sup>

Relenting to political pressure and repeated calls for delayed Common Core performance review and assessment implementation, the Board of Regents granted teachers a two-year amnesty on the use of Common Core assessment as part of the APPR evaluation process.<sup>39</sup> The Regents also voted to delay the graduate requirements for high school students passing Common Core assessments until 2022, instead of 2017.

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<sup>38</sup> New York State Education Commissioner John B. King Jr., October 24, 2013, <http://usny.nysed.gov/docs/teaching-is-the-core.pdf>

<sup>39</sup> The revisions provide that “if a school district seeks to terminate an educators based on an ineffective rating resulting from student performance on Common Core assessments administered in the 2012-13 and/or 2013-14 school years, he or she may raise as a defense an alleged failure by the board of education to timely implement the Common Core by providing adequate professional development, guidance on curriculum, or other necessary supports to the educator during their school years,” see New York State Education Department, February 10, 2014, *Adjustment Options to Common Core Implementation*, available at <http://www.regents.nysed.gov/meetings/2014/February2014/214p12hea3.pdf>

### III. Common Core Math Proficiency by Racial and Ethnic Subgroups

Several cogent critiques on the enterprise of standardized testing highlight the limits of what they can tell us about students learning. However flawed, the Common Core is now mandated state education policy. As such, the April 2013 Common Core assessments have important consequences for students, parents, educators, classrooms, and school districts. According to the New York State Common Core performance indicators, “*there are students who are above proficient, students who are proficient, students who are not quite proficient, and students who are well below proficient at each grade level.*”<sup>40</sup> Specifically, four “Levels” define math aptitude along a proficiency continuum measuring skills and knowledge necessary to meet the demands of grade-specific Common Core learning standards.

**Level 4-** Students performing at this level *excel in standards* for their grade. They demonstrate knowledge, skills, and practices embodied by the New York Common Core Learning Standards for Mathematics that are considered *more than sufficient* for the expectation at this grade.

**Level 3-** Students performing at this level *are proficient in standards* for their grade. They demonstrate knowledge, skills, and practices embodied by the New York Common Core Learning Standards for Mathematics that are considered *sufficient* for the expectation at this grade.

**Level 2-** Students performing at this level *are below proficient in standards* for their grade. They demonstrate knowledge, skills, and practices embodied by the New York Common Core Learning Standards for Mathematics that are considered *partial but insufficient* for the expectation at this grade.

**Level 1-** Students performing at this level *are well below proficient in standards* for their grade. They demonstrate knowledge, skills, and practices embodied by the New York Common Core Learning Standards for Mathematics that are considered *insufficient* for the expectation at this grade.<sup>41</sup>

Table III.1 shows that based on the 2012 Pre-Common Core assessments, 59.3 percent of sixth graders were performing at or above grade level in mathematics compared to 28.8 percent on the April 2013 Common Core math assessment. In 2012, 57.3 percent of seventh graders tested at or above proficient compared to 25 percent on the 2013 Common Core aligned assessment. Finally, 55.2 percent of eighth graders tested proficient in 2012 compared to 25.7 percent on the 2013 New York Common Core math. Hispanic seventh grade students had the largest math proficiency decline from 49.1 percent in 2012 compared to 14.0 percent in 2013, a drop of 35.1 percentage points, followed by:

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<sup>40</sup> New York Testing Program Common Core Mathematics Test: Performance Level Descriptions, Grade 8 (August 2013), p. 2, available at [http://www.engageny.org/sites/default/files/resource/attachments/grade\\_8\\_nys\\_math\\_pld.pdf](http://www.engageny.org/sites/default/files/resource/attachments/grade_8_nys_math_pld.pdf)

<sup>41</sup> Ibid.

- Seventh grade white student scores declined 34.2 percentage points from 79.3 percent to 45.1 percent.
- Sixth grade Hispanic student scores declined 33.0 percentage points from 50.4 percent to 17.4 percent.
- Eighth grade Hispanic student scores declined 32.2 percentage points from 47.8 percent to 15.6 percent.
- Seventh grade black student scores declined 32.1 percentage points from 43.1 percent to 11.0 percent.

Table III.2 shows that the Common Core assessments exacerbated math proficient gaps between Asian students and other racial and ethnic subgroups.

- The Asian-white test score gap for sixth graders increased from 7.5 percentage points in 2012 to 12.4 points in 2013, seventh graders 6.6 percentage points to 12.3 points, and eighth graders from 12.0 percentage points to 15.7 points.
- The Asian-black test score gap for sixth graders increased from 40.9 percentage points in 2012 to 46.7 points in 2013, seventh graders 42.8 percentage points to 45.1 points, and eighth graders from 43.2 percentage points to 47.7 points.
- The Asian-Hispanic test score gap for sixth graders increased from 36.3 percentage points in 2012 to 44.6 points in 2013, seventh graders 36.8 percentage to 41.8 points, and eighth graders from 37.1 percentage points to 44.4 points.

The white-black and white-Hispanic gaps are mixed.

- The white-black test score gap for sixth graders increased by one percentage point (from 33.4 in 2012 to 34.3 in 2013) and decreased three percentage points in seventh graders (36.2 to 32.8), and increased by one percentage point in eighth grade from 31.2 to 32.0.
- The white-Hispanic test score gap for sixth graders increased 3.4 percentage points from 28.8 in 2012 to 32.2 in 2013, decreased by one percentage point for seventh graders 30.2 to 29.5, and increased by 3.6 percentage points for eighth graders from 25.1 to 28.7.

Table III.3 show that black and Hispanic math proficiency rates on the 2013 Common Core math assessment were noticeable lower.

- In grade six, 15.3 percent of black students scored at or above proficient, 12.9 percentage points beneath New York City proficient rate of 28.2 percent. Sixth grade Hispanic students had a proficiency rate of 17.4 percent, 10.8 percentage points below the citywide proficient rate;
- In grade seven, 11.0 percent of black students and 14.0 percent of Hispanic students were at or above Common Core math proficient, compared to the citywide rate of 25.0 percent;

- By the eighth grade, black and Hispanic students, with proficient rates of 12.3 percent and 15.6 percent respectively, were 13.4 and 10.1 percentage points below the eighth grade citywide rate of 25.7 percent;
- In contrast, in grade six, 62.0 percent of Asian students scored at or above proficient, 33.8 percentage points above New York City proficient rate. Sixth grade white students had a proficiency rate of 49.6 percent, 12.5 percentage points higher than citywide average;
- In grade seven, 57.4 percent of Asian students and 45.1 percent of white students were at or above Common Core math proficient, compared to the citywide rate of 25.0 percent;
- By the eighth grade, Asian and white students, with proficient rates of 60.0 percent and 44.3 percent respectively, were 34.3 and 18.6 percentage points above the eighth grade citywide rate of 25.7 percent;

Table III.4 shows a pattern of *Common Core proficiency gaps* where Asians students have higher proficient rates than their peer groups, white students surpass black and Hispanic students, and Hispanic students slightly outperformed black students.

- The Asian/white *Common Core proficiency gap*, in the sixth-grade, is 12.4 percentage points, 12.3 points in seventh-grade, and 15.7 percentage points in the eighth-grade;
- The Asian/black *Common Core proficiency gap*, in the sixth-grade, is 46.7 percentage points, 46.4 points in seventh-grade and 47.7 percentage points in the eighth-grade;
- The Asian/Hispanic *Common Core proficiency gap*, in the sixth-grade, is 44.6 percentage points, 43.4 points in seventh-grade, and 44.4 percentage points in the eighth-grade.
- The white/black *Common Core proficiency gap*, in the sixth-grade, is 34.3 percentage points, 34.1 points in seventh-grade, and 32.0 percentage points in the eighth-grade;
- The white/Hispanic *Common Core proficiency gap*, in the sixth-grade, is 32.2 percentage points, 31.1 points in seventh-grade, and 28.7 percentage points in the eighth-grade.
- The Hispanic/black *Common Core proficiency gap*, in the sixth-grade, is 2.1 percentage points, 3.0 points in seventh-grade, and 3.3 percentage points in the eighth-grade.

Table III.5 show that at each grade, a larger percentage of Asian and white students demonstrate **Level 4** knowledge, skills, and practices embodied by the New York Common Core Learning Standards for Mathematics that are considered *more than sufficient* for the expectation at grade level.

- In the sixth grade, the percentage of Asian students at Level 4 is 8.5 times higher than black (37.5 to 4.4) and 6.8 times greater than the number of Hispanic students (37.5 to 5.5).

- In the sixth grade, the percentage of white students at Level 4 is 5.9 times greater than black (26.2 to 4.4) and 4.7 times higher than the number of Hispanic students (26.2 to 5.5).
- In the seventh grade, the percentage of Asian students at Level 4 is 15.9 times higher than black (27.1 to 1.7) and 12.3 times greater than the number of Hispanic students (27.1 to 2.2).
- In the seventh grade, the percentage of white students at Level 4 is 9.7 times greater than black (16.5 to 1.7) and 7.5 times higher than the number of Hispanic students (16.5 to 2.2).
- In the eighth grade, the percentage of Asian students at Level 4 is 15.3 times higher than black (29.0 to 1.9) and 10.0 times greater than the number of Hispanic students (29.0 to 2.9).
- In the eighth grade, the percentage of white students at Level 4 is 8.8 times greater than black (16.8 to 1.9) and 5.7 times higher than the number of Hispanic students (16.8 to 2.9).

Table III.6 show that at each grade, a larger percentage of black and Hispanic students scored at the “well below proficient” *Level 1* than their Asian or white counterparts.

- In the sixth grade, the percentage of black students at Level 1 is 4.4 times higher than Asian (45.8 to 10.4) and 2.9 times greater than the number of white students (45.8 to 15.5).
- In the sixth grade, the percentage of Hispanic students at Level 1 is 3.9 times greater than Asian (40.7 to 10.4) and 2.6 times higher than the number of white students (40.7 to 15.5).
- In the seventh grade, the percentage of black students at Level 1 is 3.8 times higher than Asian (60 to 15.6) and 2.6 times greater than the number of white students (60 to 22.6).
- In the seventh grade, the percentage of Hispanic students at Level 1 is 3.4 times greater than Asian (53.9 to 15.6) and 2.4 times higher than the number of white students (53.9 to 22.6).
- In the eighth grade, the percentage of black students at Level 1 is 4.4 times higher than Asian (50.4 to 11.3) and 3.0 times greater than the number of white students.(50.4 to 16.8)
- In the eighth grade, the percentage of Hispanic students at Level 1 is 3.9 times greater than Asian (44.5 to 11.3) and 2.6 times higher than the number of white students (44.5 to 16.8)

<b>Table III.1</b>			
<b>Percentage Proficiency Change By Racial and Ethnic Subgroups</b>			
<b>(2012 to 2013)</b>			
	<b>2012</b>	<b>2013</b>	<b>Difference</b>
<b>6<sup>th</sup> Grade</b>			
Asian	86.7	62.0	-24.7
Black	45.8	15.3	-33.5
Hispanic	50.4	17.4	-33.0
White	79.2	40.7	-38.5
Overall	59.3	28.3	-31.0
<b>7<sup>th</sup> Grade</b>			
Asian	85.9	57.4	-28.5
Black	43.1	11.0	-32.1
Hispanic	49.1	14.0	-35.1
White	79.3	45.1	-34.2
Overall	57.3	25.0	-32.3
<b>8<sup>th</sup> Grade</b>			
Asian	84.9	60.0	-24.9
Black	41.7	12.3	-29.4
Hispanic	47.8	15.6	-32.2
White	72.9	44.3	-28.6
Overall	55.2	25.7	-29.5



**Table III.2  
Change in Math Proficiency Rates by Racial and Ethnic Subgroups  
(2012 to 2013)**

	6 <sup>th</sup> Grade		7 <sup>th</sup> Grade		8 <sup>th</sup> Grade	
	2012	2013	2012	2013	2012	2013
Asian	86.7	62.0	85.9	57.4	84.9	60.0
White	79.2	49.6	79.3	45.1	72.9	44.3
<b>Difference</b>	<b>7.5</b>	<b>12.4</b>	<b>6.6</b>	<b>12.3</b>	<b>12.0</b>	<b>15.5</b>
Asian	86.7	62.0	85.9	57.4	84.9	60.0
Black	45.8	15.3	43.1	12.3	41.7	12.3
<b>Difference</b>	<b>40.9</b>	<b>46.7</b>	<b>42.8</b>	<b>45.1</b>	<b>43.2</b>	<b>47.7</b>
Asian	86.7	62.0	85.9	57.4	84.9	60.0
Hispanic	50.4	17.4	49.1	15.6	47.8	15.6
<b>Difference</b>	<b>36.3</b>	<b>44.6</b>	<b>36.8</b>	<b>41.8</b>	<b>37.1</b>	<b>44.4</b>
White	79.2	49.6	79.3	45.1	72.9	44.3
Black	45.8	15.3	43.1	12.3	41.7	12.3
<b>Difference</b>	<b>33.4</b>	<b>34.3</b>	<b>36.2</b>	<b>32.8</b>	<b>31.2</b>	<b>32.0</b>
White	79.2	49.6	79.3	45.1	72.9	44.3
Hispanic	50.4	17.4	49.1	15.6	47.8	15.6
<b>Difference</b>	<b>28.8</b>	<b>32.2</b>	<b>30.2</b>	<b>29.5</b>	<b>25.1</b>	<b>28.7</b>
Hispanic	50.4	17.4	49.1	15.6	47.8	15.6
Black	45.8	15.3	43.1	12.3	41.7	12.3
<b>Difference</b>	<b>4.6</b>	<b>2.1</b>	<b>6.0</b>	<b>3.3</b>	<b>6.1</b>	<b>3.3</b>

<b>Table III.3</b>				
<b>Percentage Distribution of Students at Common Core Math Proficiency</b>				
<b>(Racial and Ethnic Subgroups and Grade)</b>				
<b>6<sup>th</sup> Grade</b>	<b>Asian</b>	<b>Black</b>	<b>Hispanic</b>	<b>White</b>
<i>Level 1</i>	10.4	45.8	40.7	15.5
<i>Level 2</i>	27.6	39.0	42.0	34.8
<i>Level 3</i>	24.5	10.9	11.9	23.5
<i>Level 4</i>	37.5	4.4	5.5	26.2
<i>Proficient</i>	62.0	15.3	17.4	49.6
<b>7<sup>th</sup> Grade</b>	<b>Asian</b>	<b>Black</b>	<b>Hispanic</b>	<b>White</b>
<i>Level 1</i>	15.6	60.0	53.9	22.6
<i>Level 2</i>	27.1	29.0	32.1	32.3
<i>Level 3</i>	30.3	9.2	11.8	28.7
<i>Level 4</i>	27.1	1.7	2.2	16.5
<i>Proficient</i>	57.4	11.0	14.0	45.1
<b>8<sup>th</sup> Grade</b>	<b>Asian</b>	<b>Black</b>	<b>Hispanic</b>	<b>White</b>
<i>Level 1</i>	11.3	50.4	44.5	16.8
<i>Level 2</i>	28.7	37.3	39.8	38.9
<i>Level 3</i>	31.0	10.3	12.7	28.3
<i>Level 4</i>	29.0	1.9	2.9	16.0
<i>Proficient</i>	60.0	12.3	15.6	44.3

<b>Table III.4</b>			
<b>Common Core Proficiency Gap by Racial and Ethnic Subgroups</b>			
	<b>6<sup>th</sup> Grade</b>	<b>7<sup>th</sup> Grade</b>	<b>8<sup>th</sup> Grade</b>
Asian	62.0	57.4	60.0
White	49.6	45.1	44.3
<b>Common Core Gap</b>	<b>12.4</b>	<b>12.3</b>	<b>15.7</b>
Asian	62.0	57.4	60.0
Black	15.3	11.0	12.3
<b>Common Core Gap</b>	<b>46.7</b>	<b>46.4</b>	<b>47.7</b>
Asian	62.0	57.4	60.0
Hispanic	17.4	14.0	15.6
<b>Common Core Gap</b>	<b>44.6</b>	<b>43.4</b>	<b>44.4</b>
White	49.6	45.1	44.3
Black	15.3	11.0	12.3
<b>Common Core Gap</b>	<b>34.3</b>	<b>34.1</b>	<b>32.0</b>
White	49.6	45.1	44.3
Hispanic	17.4	14.0	15.6
<b>Common Core Gap</b>	<b>32.2</b>	<b>31.1</b>	<b>28.7</b>
Hispanic	17.4	14.0	15.6
Black	15.3	11.0	12.3
<b>Common Core Gap</b>	<b>2.1</b>	<b>3.0</b>	<b>3.3</b>

<b>Table III.5</b>			
<b>Percentage Level 4 Common Core Proficiency Gap by Racial Subgroups</b>			
	<b>6<sup>th</sup> Grade</b>	<b>7<sup>th</sup> Grade</b>	<b>8<sup>th</sup> Grade</b>
Asian	37.5	27.1	29.0
White	26.2	16.5	16.0
<b>Common Core Gap</b>	<b>11.3</b>	<b>10.6</b>	<b>13.0</b>

Asian	37.5	27.1	29.0
Black	4.4	1.7	1.9
<b>Common Core Gap</b>	<b>33.1</b>	<b>25.4</b>	<b>27.1</b>

Asian	37.5	27.1	29.0
Hispanic	5.5	2.2	2.9
<b>Common Core Gap</b>	<b>32.0</b>	<b>24.9</b>	<b>27.1</b>

White	26.2	16.5	16.0
Black	4.4	1.7	1.9
<b>Common Core Gap</b>	<b>21.8</b>	<b>14.8</b>	<b>14.1</b>

White	26.2	16.5	16.0
Hispanic	5.5	2.2	2.9
<b>Common Core Gap</b>	<b>20.7</b>	<b>14.3</b>	<b>13.1</b>

Hispanic	5.5	2.2	2.9
Black	4.4	1.7	1.9
<b>Common Core Gap</b>	<b>1.1</b>	<b>0.5</b>	<b>1.0</b>

<b>Table III.6</b>			
<b>Percentage Level 1 Common Core Proficiency Gap by Racial and Ethnic Subgroups</b>			
	<b>6<sup>th</sup> Grade</b>	<b>7<sup>th</sup> Grade</b>	<b>8<sup>th</sup> Grade</b>
White	15.5	22.6	16.8
Asian	10.4	15.6	11.3
<b>Common Core Gap</b>	<b>5.1</b>	<b>7.0</b>	<b>5.5</b>
Black	45.8	60.0	50.4
Asian	10.4	15.6	11.3
<b>Common Core Gap</b>	<b>35.4</b>	<b>44.4</b>	<b>39.1</b>
Hispanic	40.7	53.9	44.5
Asian	10.4	15.6	11.3
<b>Common Core Gap</b>	<b>30.3</b>	<b>38.3</b>	<b>33.2</b>
Black	45.8	60.0	50.4
White	15.5	22.6	16.8
<b>Common Core Gap</b>	<b>30.3</b>	<b>37.4</b>	<b>33.6</b>
Hispanic	40.7	53.9	44.5
White	15.5	22.6	16.8
<b>Common Core Gap</b>	<b>25.2</b>	<b>31.3</b>	<b>27.7</b>
Black	45.8	60.0	50.4
Hispanic	40.7	53.9	44.5
<b>Common Core Gap</b>	<b>5.1</b>	<b>6.1</b>	<b>5.9</b>

#### **IV. Common Core Math Proficiency by Racial Composition of Middle School**

This section examines math proficiency rates by the racial composition of the school.

- Majority Hispanic schools are defined as those where at least half of the student population is Hispanic.
- Majority black schools are defined as those where at least half of the student population is black.
- Majority Asian schools are defined as those where at least half of the student population is Asian.
- Majority white schools are defined as those where at least half of the student population is white.

Majority Asian schools had the highest Common Core scores where 100 percent of all grade-levels scored at or above New York City math proficient averages. The top five performers are:

1. 99.7 percent, *Christa McAuliffe School, I.S. 187*, (Grade 6)
2. 99.6 percent, *Christa McAuliffe School, I.S. 187*, (Grade 7)
3. 98.3 percent, *Christa McAuliffe School I.S. 187*, (Grade 8)
4. 90.9 percent *P.S. 184m Shuang Wen*, (Grade 8)
5. 86.0 percent *P.S. 184m Shuang Wen*, (Grade 6)

See [Appendix IV.1](#) for complete list of Majority Asian schools.

Majority white schools had 95 percent of sixth grade, 88 percent of seventh grade, and 88 percent of eighth grade scoring at or above the citywide Common Core grade-level averages. The top five performers are:

1. 100 percent, *The Anderson School*, (Grade 6)
2. 98.5 percent, *The Anderson School*, (Grade 8)
3. 98.4 percent, *The Anderson School* (Grade 7)
4. 96.3 percent, *New Explorations Science, Technology and Math High School*, (Grade 7)
5. 93.8 percent, *Special Music School*, (Grade 7)

See [Appendix IV.2](#) for complete list of majority white schools.

Majority Hispanic schools had 16.0 percent of sixth grade, 9.8 percent of seventh grade, and 12.5 percent of eighth grade scoring at or above the citywide Common Core grade-level averages. The top five performers are:

1. 76.3 percent, *All City Leadership Secondary School*, (Grade 7)
2. 57.8 percent, *Comprehensive Model School Project ,M.S. 327*, (Grade 6)
3. 54.7 percent, *The Mott Hall School*, (Grade 7 )
4. 54.6 percent, *P.S./M.S. 194*, (Grade 6)
5. 52.5 percent, *All City Leadership Secondary School*, (Grade 6)

See [Appendix IV.3](#) for complete list of majority Hispanic schools.

Majority black schools had 12.8 percent of sixth grade, 9.5 percent of seventh grade, and 13.6 percent in eighth grade scoring at or above the citywide Common Core grade-level averages. The top five performers are:

1. 87.5 percent, *PS. 235, Lenox School* (Grade 6)
2. 80.6 percent, *P.S. 235, Lenox School*, (Grade 7)
3. 73.2 percent, *P.S. 392*, (Grade 8)
4. 69.7 percent, *P.S. 235, Lenox School*, (Grade 8)
5. 65.9 percent, *Medgar Evers College Preparatory School*, (Grade 7)

See [Appendix IV.4](#) for complete list of majority black schools.

## V. Common Core Math Proficiency within Five Boroughs of New York City

Table V.1 shows that place matters. The borough of Queens has the greatest income equality by racial subgroups, with black and Hispanic households earning nearly as much as white households.<sup>42</sup> Middle school students in Queens also have the highest proficiency levels: where 36.5 percent of sixth-graders, 32.7 percent of seventh graders, and 33.5 percent of eighth-graders tested at or above Common Core math proficiency. Asian sixth grade students in Manhattan recorded the highest level of math proficiency in New York City (73.5 percent). White sixth graders in Manhattan were three points behind at 70.6 percent. However, black (15.7 percent) and Hispanic (17.9 percent) sixth grade middle school students in Manhattan trailed their white and Asian Manhattan peer groups by 50 percent Common Core proficiency margins. *Common Core proficiency gaps* are equally stark between racial and ethnic subgroups throughout the five boroughs of New York City in grade 6 (Table V. 2), grade 7 (Table V.3) and grade 8 (Table V.4).

### In the Bronx:

- The Asian/white *Common Core proficiency gap*, in the sixth-grade, is 15.8 percentage points, 11.7 points in seventh-grade, and 15.2 percentage points in the eighth-grade.
- The Asian/black *Common Core proficiency gap*, in the sixth-grade, is 36.5 percentage points, 32.6 points in seventh-grade and 32.1 percentage points in the eighth-grade.
- The Asian/Hispanic *Common Core proficiency gap*, in the sixth-grade, is 36.6 percentage points, 31.1 points in seventh-grade, and 30.9 percentage points in the eighth-grade.
- The white/black *Common Core proficiency gap*, in the sixth-grade, is 20.7 percentage points, 20.9 points in seventh-grade, and 16.9 percentage points in the eighth-grade.
- The white/Hispanic *Common Core proficiency gap*, in the sixth-grade, is 20.8 percentage points, 19.4 points in seventh-grade, and 15.7 percentage points in the eighth-grade.

### In Brooklyn:

- The Asian/white math gap, in the sixth-grade, is 11.6 percentage points, 13.5 points in seventh-grade, and 15.0 percentage points in the eighth-grade.
- The Asian/black math gap, in the sixth-grade, is 40.0 percentage points, 47.1 points in seventh-grade and 47.6 percentage points in the eighth-grade.

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<sup>42</sup> See, Poverty in New York City: Borough by Borough Analysis of Data from the U.S. Census Bureau's 2011 American Community Survey, September 2012, available at, <http://www.alignny.org/wp-content/uploads/2012/09/NYC-Poverty-Report-2012.pdf>



- The Asian/Hispanic math gap, in the sixth-grade, is 46.4 percentage points, 45.1 points in seventh-grade, and 46.4 percentage points in the eighth-grade.
- The white/black math gap, in the sixth-grade, is 34.7 percentage points, 33.6 points in seventh-grade, and 32.6 percentage points in the eighth-grade.
- The white/Hispanic math gap, in the sixth-grade, is 34.8 percentage points, 31.6 points in seventh-grade, and 31.4 percentage points in the eighth-grade.

**In Manhattan:**

- The Asian/white math gap, in the sixth-grade, is 2.9 percentage points, 4.9 points in seventh-grade, and 5.8 percentage points in the eighth-grade.
- The Asian/black math gap, in the sixth-grade, is 57.8 percentage points, 58.5 points in seventh-grade and 58.4 percentage points in the eighth-grade.
- The Asian/Hispanic math gap, in the sixth-grade, is 55.6 percentage points, 56.0 points in seventh-grade, and 55.7 percentage points in the eighth-grade.
- The white/black math gap, in the sixth-grade, is 54.9 percentage points, 53.6 points in seventh-grade, and 52.6 percentage points in the eighth-grade.
- The white/Hispanic math gap, in the sixth-grade, is 52.7 percentage points, 51.1 points in seventh-grade, and 49.9 percentage points in the eighth-grade.

**In Queens:**

- The Asian/white math gap, in the sixth-grade, is 14.1 percentage points, 11.5 points in seventh-grade, and 15.6 percentage points in the eighth-grade.
- The Asian/black math gap, in the sixth-grade, is 44.3 percentage points, 44.4 points in seventh-grade and 47.2 percentage points in the eighth-grade.
- The Asian/Hispanic math gap, in the sixth-grade, is 36.4 percentage points, 36.4 points in seventh-grade, and 36.7 percentage points in the eighth-grade.
- The white/black math gap, in the sixth-grade, is 30.2 percentage points, 32.9 points in seventh-grade, and 31.6 percentage points in the eighth-grade.
- The white/Hispanic math gap, in the sixth-grade, is 22.3 percentage points, 24.9 points in seventh-grade, and 21.1 percentage points in the eighth-grade.

**In Staten Island:**

- The Asian/white math gap, in the sixth-grade, is 18.9 percentage points, 15.6 points in seventh-grade, and 25.4 percentage points in the eighth-grade.
- The Asian/black math gap, in the sixth-grade, is 49.9 percentage points, 43.0 points in seventh-grade and 51.1 percentage points in the eighth-grade.
- The Asian/Hispanic math gap, in the sixth-grade, is 46.1 percentage points, 40.6 points in seventh-grade, and 43.7 percentage points in the eighth-grade.
- The white/black math gap, in the sixth-grade, is 31.0 percentage points, 27.4 points in seventh-grade, and 25.7 percentage points in the eighth-grade.

- The white/Hispanic math gap, in the sixth-grade, is 27.2 percentage points, 25.0 points in seventh-grade, and 18.3 percentage points in the eighth-grade.

Table V.5 displays the percentage of students falling into the lowest Level 1 “well below” category in each of the five boroughs. There is a notable racial dimension: For example, Staten Island is New York City’s most racially homogenous borough, with a white population of 64 percent. The borough also has the largest Common Core racial inequities. Over thirty percent of sixth grade, 28.9 percent of seventh grade, and 29.0 percent of eighth grade students in Staten Island tested at or above Common Core math proficiency. At the same time, a majority of black sixth graders in Staten Island (61.2 percent), seventh graders (67.3 percent), and eighth graders (57.6 percent) tested at Level 1, demonstrating an “*insufficient*” basic understanding of grade-level Common Core math concepts.

- Over fifty percent of sixth grade black students in the Bronx (50.6 percent) tested “well below” Common Core math proficient.
- A vast majority of black students in seventh grade classrooms in the Bronx (64.1), Manhattan (61.6), Brooklyn (58.6) and Queens (56.8) tested “well below” Common Core math proficient.
- Over fifty percent of eighth grade black students in Staten Island (57.6 percent), the Bronx (55.8 percent), and Manhattan (51.6 percent) tested “well below” Common Core math proficient.
- Over fifty percent of seventh grade Hispanic students in the Bronx (61.9 percent), Brooklyn (54.7), Manhattan (52.4), and Staten Island (50.5); as well as the eighth grade Hispanic students in the Bronx (53.1) tested “well below” Common Core math proficient.

<b>Table V.1</b>					
<b>Percentage Distribution of Students at Common Core Math Proficiency</b>					
<b>(Borough and Grade)</b>					
	<u>Bronx</u>	<u>Brooklyn</u>	<u>Manhattan</u>	<u>Queens</u>	<u>Staten Island</u>
<b>6<sup>th</sup> Grade</b>					
Level 1	46.8	34.0	30.4	24.7	29.3
Level 2	38.2	37.3	35.2	38.7	39.0
Level 3	10.3	15.2	16.7	18.4	17.7
Level 4	4.7	13.5	17.7	18.2	14.0
<b>Proficient</b>	<b>15.0</b>	<b>28.7</b>	<b>34.3</b>	<b>36.5</b>	<b>31.7</b>
<b>7<sup>th</sup> Grade</b>					
Level 1	60.1	45.9	41.7	34.7	35.3
Level 2	28.1	29.6	28.5	32.5	35.8
Level 3	9.7	15.7	17.6	21.4	21.7
Level 4	2.0	8.8	12.2	11.3	7.2
<b>Proficient</b>	<b>11.7</b>	<b>24.5</b>	<b>29.8</b>	<b>32.7</b>	<b>28.9</b>
<b>8<sup>th</sup> Grade</b>					
Level 1	51.9	37.6	34.8	27.6	28.6
Level 2	35.4	36.7	35.0	38.8	42.4
Level 3	10.2	17.3	18.4	21.1	21.1
Level 4	2.4	8.4	11.8	12.5	7.9
<b>Proficient</b>	<b>12.6</b>	<b>25.7</b>	<b>30.2</b>	<b>33.5</b>	<b>29.0</b>

<b>Table V.2</b>					
<b>Common Core Proficiency Gap by Racial Subgroup and Grade</b>					
<b>6<sup>th</sup> Grade</b>					
	<u>Bronx</u>	<u>Brooklyn</u>	<u>Manhattan</u>	<u>Queens</u>	<u>Staten Island</u>
Asian	49.2	62.5	73.5	61.1	60.2
White	33.4	50.9	70.6	47.0	41.3
<b>CC Gap</b>	<b>15.8</b>	<b>11.6</b>	<b>2.9</b>	<b>14.1</b>	<b>18.9</b>
Asian	49.2	62.2	73.5	61.1	60.2
Black	12.7	16.2	15.7	16.8	10.3
<b>CC Gap</b>	<b>36.5</b>	<b>40.0</b>	<b>57.8</b>	<b>44.3</b>	<b>49.9</b>
Asian	49.2	62.5	73.5	61.1	60.2
Hispanic	12.6	16.1	17.9	24.7	14.1
<b>CC Gap</b>	<b>36.6</b>	<b>46.4</b>	<b>55.6</b>	<b>36.4</b>	<b>46.1</b>
White	33.4	50.9	70.6	47.0	41.3
Black	12.7	16.2	15.7	16.8	10.3
<b>CC Gap</b>	<b>20.7</b>	<b>34.7</b>	<b>54.9</b>	<b>30.2</b>	<b>31.0</b>
White	33.4	50.9	70.6	47.0	41.3
Hispanic	12.6	16.1	17.9	24.7	14.1
<b>CC Gap</b>	<b>20.8</b>	<b>34.8</b>	<b>52.7</b>	<b>22.3</b>	<b>27.2</b>
Hispanic	12.6	16.1	17.9	24.7	14.1
Black	12.7	16.2	15.7	16.8	10.3
<b>CC Gap</b>	<b>----</b>	<b>-----</b>	<b>2.2</b>	<b>7.9</b>	<b>3.8</b>

<b>Table V.3</b>					
<b>Common Core Proficiency Gap by Racial Subgroup and Grade</b>					
<b>7<sup>th</sup> Grade</b>					
	<u>Bronx</u>	<u>Brooklyn</u>	<u>Manhattan</u>	<u>Queens</u>	<u>Staten Island</u>
Asian	41.2	58.8	70.3	56.2	52.9
White	29.5	45.3	65.4	44.7	37.3
<b>CC Gap</b>	<b>11.7</b>	<b>13.5</b>	<b>4.9</b>	<b>11.5</b>	<b>15.6</b>
Asian	41.2	58.8	70.3	56.2	52.9
Black	8.6	11.7	11.8	11.8	9.9
<b>Gap</b>	<b>32.6</b>	<b>47.1</b>	<b>58.5</b>	<b>44.4</b>	<b>43.0</b>
Asian	41.2	58.8	70.3	56.2	52.9
Hispanic	10.1	13.7	14.3	19.8	12.3
<b>CC Gap</b>	<b>31.1</b>	<b>45.1</b>	<b>56.0</b>	<b>36.4</b>	<b>40.6</b>
White	29.5	45.3	65.4	44.7	37.3
Black	8.6	11.7	11.8	11.8	9.9
<b>CC Gap</b>	<b>20.9</b>	<b>33.6</b>	<b>53.6</b>	<b>32.9</b>	<b>27.4</b>
White	29.5	45.3	65.4	44.7	37.3
Hispanic	10.1	13.7	14.3	19.8	12.3
<b>CC Gap</b>	<b>19.4</b>	<b>31.6</b>	<b>51.1</b>	<b>24.9</b>	<b>25.0</b>
Hispanic	10.1	13.7	14.3	19.8	12.3
Black	8.6	11.7	11.8	11.8	9.9
<b>CC Gap</b>	<b>1.5</b>	<b>2.0</b>	<b>2.5</b>	<b>8.0</b>	<b>2.4</b>

<b>Table V.4</b>					
<b>Common Core Proficiency Gap by Racial Subgroup and Grade</b>					
<b>8<sup>th</sup> Grade</b>					
	<u>Bronx</u>	<u>Brooklyn</u>	<u>Manhattan</u>	<u>Queens</u>	<u>Staten Island</u>
Asian	42.1	61.2	71.5	58.9	60.5
White	26.9	46.2	65.7	43.3	35.1
<b>CC Gap</b>	<b>15.2</b>	<b>15.0</b>	<b>5.8</b>	<b>15.6</b>	<b>25.4</b>
Asian	42.1	61.2	71.5	58.9	60.5
Black	10.0	13.6	13.1	11.7	9.4
<b>CC Gap</b>	<b>32.1</b>	<b>47.6</b>	<b>58.4</b>	<b>47.2</b>	<b>51.1</b>
Asian	42.1	61.2	71.5	58.9	60.5
Hispanic	11.2	14.8	15.8	22.2	16.8
<b>CC Gap</b>	<b>30.9</b>	<b>46.4</b>	<b>55.7</b>	<b>36.7</b>	<b>43.7</b>
White	26.9	46.2	65.7	43.3	35.1
Black	10.0	13.6	13.1	11.7	9.4
<b>CC Gap</b>	<b>16.9</b>	<b>32.6</b>	<b>52.6</b>	<b>31.6</b>	<b>25.7</b>
White	26.9	46.2	65.7	43.3	35.1
Hispanic	11.2	14.8	15.8	22.2	16.8
<b>CC Gap</b>	<b>15.7</b>	<b>31.4</b>	<b>49.9</b>	<b>21.1</b>	<b>18.3</b>
Hispanic	11.2	14.8	15.8	22.2	16.8
Black	10.0	13.6	13.1	11.7	9.4
<b>CC Gap</b>	<b>1.2</b>	<b>1.2</b>	<b>2.7</b>	<b>10.5</b>	<b>7.4</b>

<b>Table V.5</b>			
<b>Percentage Level 1 “well below” Common Core Math Proficiency</b>			
<b>(Borough and Grade)</b>			
<b>Overall</b>	<b>Grade 6</b>	<b>Grade 7</b>	<b>Grade 8</b>
Bronx	46.8	<b>60.1</b>	<b>51.9</b>
Brooklyn	34.0	45.9	37.6
Manhattan	30.4	41.7	34.8
Queens	24.7	34.7	27.6
Staten Island	29.3	35.3	28/6
<b>Asian</b>			
Bronx	19.6	27.5	22.6
Brooklyn	10.9	16.1	11.6
Manhattan	5.5	7.3	6.5
Queens	10.1	15.5	11.1
Staten Island	10.6	17.5	9.6
<b>Black</b>			
Bronx	<b>50.6</b>	<b>64.1</b>	<b>55.8</b>
Brooklyn	45.0	<b>58.6</b>	48.5
Manhattan	45.0	<b>61.6</b>	<b>51.6</b>
Queens	40.5	<b>56.8</b>	47.2
Staten Island	<b>61.2</b>	<b>67.3</b>	<b>57.6</b>
<b>Hispanic</b>			
Bronx	48.1	<b>61.9</b>	<b>53.1</b>
Brooklyn	41.3	<b>54.7</b>	44.9
Manhattan	39.4	<b>52.4</b>	43.0
Queens	30.6	43.5	33.3
Staten Island	44.5	<b>50.5</b>	44.2
<b>White</b>			
Bronx	26.0	37.2	30.3
Brooklyn	15.7	24.2	17.2
Manhattan	8.3	12.6	9.3
Queens	15.6	21.6	17.0
Staten Island	17.1	23.6	16.7



## VI. Common Core Math Proficiency by New York City Community School Districts

Table VI.1 confirms that Community School Districts matter. Middle schools located in higher income Community School District performed much better on the 2013 Common Core math assessment than middle schools located in lower income Community School Districts. A majority of residents in the borough of Queens are middle class. In CSD 24, CSD 25, and CSD 28, each located within the borough of Queens, between 50 and 85 percent of all grade levels scored at or above the New York City Common Core proficient grade-level averages. A majority of families in the predominately African American and Latino neighborhoods of the Bronx (South Bronx), Brooklyn (including Central Brooklyn and Ocean Hill-Brownsville), and Manhattan (Central Harlem) struggle to meet their basic needs.<sup>43</sup> In these district far fewer schools score at or above grade-level averages.

The New York City sixth grade Common Core math proficiency average was, 28.2 percent, seventh grade 25.0 percent, and 25.7 percent in eighth grade. In CSD 26, located in close proximity to the wealthy Nassau County suburbs, one hundred percent of all schools, at each grade level, tested at or above citywide math proficient averages. The top performers by grade-levels are:

- *J.H.S. 067 Louis Pasteur* sixth grade Common Core proficient rate of 76 percent, 47.8 percentage points higher than the citywide average of 28.2 percent.
- *J.H.S. 074 Nathaniel Hawthorne* seventh grade Common Core proficient rate of 69.3 percent, 44.3 percentage points higher than the citywide average of 25.0 percent.
- *P.S./I.S. 266* eighth grade Common Core proficient rate of 72.1 percent, 46.4 percentage points higher than the citywide average of 25.7 percent.

In CSD 2 in Manhattan 57.1 percent of sixth grade, 71.4 percent of seventh grade, and 71.4 percent of eighth grade scored at or above citywide grade-level averages: The top performers by grade-levels are:

- *New York City Lab Middle School for Collaborative Studies* sixth grade Common Core proficient rate of 91.7 percent, 63.5 percentage points higher than the citywide average of 28.2 percent.
- *New York City Lab Middle School for Collaborative Studies* seventh grade Common Core proficient rate of 90.4 percent, 65.4 percentage points higher than the citywide average of 25.0 percent.

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<sup>43</sup> See, the Self-sufficiency Standard for New York City, 2010, Diana Pearce, June 2010, available at <http://www.selfsufficiencystandard.org/docs/New%20York%20City%202010.pdf>

- *New York City Lab Middle School for Collaborative Studies* eighth grade Common Core proficient rate of 95.0 percent, 69.3 percentage points higher than the citywide average of 25.7 percent.

In CSD 5 in Central Harlem, only one middle school scored higher than the citywide grade-level averages. No other middle school scored above citywide averages. The top performers by grade-levels are:

- *Columbia Secondary School* sixth grade Common Core proficient rate of 91.2 percent, 63.5 percentage points higher than the citywide average of 27.7 percent.
- *Columbia Secondary School* seventh grade Common Core proficient rate of 79.6 percent, 51.6 percentage points higher than the citywide average of 25.0 percent.
- *Columbia Secondary School* eighth grade Common Core proficient rate of 51.0 percent, 25.3 percentage points higher than the citywide average of 25.7 percent.

In the Bronx CSD 7, one middle school sixth grade, one middle school seventh grade, and no middle school eighth grade scored higher than the citywide grade-level averages. No other grade-levels scored at or above the New York City averages. The top performers by grade-levels are:

- *M.S. 223 the Laboratory School of Finance and Technology* sixth grade Common Core proficient rate of 42.4 percent, 14.2 percentage points higher than the citywide average of 28.2 percent.
- *Hostos-Lincoln Academy of Science* seventh grade Common Core proficient rate of 41.2 percent, 16.2 percentage points higher than the citywide average of 25.0 percent.
- *M.S. 223 the Laboratory School of Finance and Technology* eighth grade Common Core proficient rate of 24.3 percent, **1.4 percentage points lower** than the citywide average of 25.7 percent.

In Central Brooklyn CSD 13, 18.1 percent of sixth grade and 16.6 percent of eighth grade scored at or above citywide average. No seventh grade schools scored higher than the citywide grade-level averages. The top performers by grade-levels are:

- *P.S. 008 Robert Fulton* sixth grade Common Core proficient rate of 61.4 percent, 33.2 percentage points higher than the citywide average of 28.2 percent.
- *Urban Assembly Institute of Math and Science for Young Women* seventh grade Common Core proficient rate of 20.6 percent, **4.4 percentage points lower** than the citywide average of 25.0 percent.
- *Urban Assembly Academy of Arts and Letters* eighth grade Common Core proficient rate of 33.3 percent, 7.6 percentage points higher than the citywide average of 25.7 percent.

In Central Brooklyn CSD 14, only two middle schools tested at or above the citywide grade-level math proficient averages. The top performers are:

- *Young Women's Leadership School of Brooklyn* sixth grade Common Core proficient rate of 28.0 percent, equal to the citywide average of 28.2 percent.
- *I.S. 318 Eugenio Maria De Hostos* seventh grade Common Core proficient rate of 35.2 percent, 10.2 percentage points higher than the citywide average of 25.0 percent.
- *I.S. 318 Eugenio Maria De Hostos* eighth grade Common Core proficient rate of 38.9 percent, 13.2 percentage points higher than the citywide average of 25.7 percent.

In Central Brooklyn CSD 16, located in Bedford-Stuyvesant, no schools, at any grade levels, scored at or above the New York City grade-level averages. The top performers are:

- *M.S. 267 Math, Science, & Technology* sixth grade Common Core proficient rate of 16.7 percent, **11.5 percentage points lower** than the citywide average of 28.2 percent.
- *P.S. 308 Clara Cardwell* seventh grade Common Core proficient rate of 8.2 percent, **14.8 percentage points lower** than the citywide average of 25.0 percent.
- *J.H.S. 057 Whitelaw Reid* eighth grade Common Core proficient rate of 15.1 percent, **10.6 percentage points lower** than the citywide average of 25.7 percent.

In Ocean Hill-Brownsville Brooklyn CSD 23, 11.7 percent of sixth grade, 10.5 percent of seventh grade, and 1.0 percent of eighth grade scored at or above citywide average. The top performers by grade-levels are:

- *I.S. 392* sixth grade Common Core proficient rate of 54.8 percent, 26.6 percentage points higher than the citywide average of 28.2 percent.
- *I.S. 392* seventh grade Common Core proficient rate of 52.0 percent, 27.0 percentage points higher than the citywide average of 25.0 percent.
- *I.S. 392* eighth grade Common Core proficient rate of 73.2 percent, 47.5 percentage points higher than the citywide average of 25.7 percent.

Manhattan CSD 2 is a model of progressive educational reform in New York City. The district is located in the white upper-middle class neighborhoods below Central Park, including Wall Street, the Upper East Side, and Battery Park City. Fifty-two percent of CSD 2 sixth graders, 45.0 percent of seventh graders, and 48.1 percent of eighth graders scored at Common Core proficiency. Less than a mile away from CDS 2, a majority of students in Central Harlem CSD 5 are eligible for federal-assisted free meal programs (for students with family income less than 1.3 times the poverty level) or reduced priced meals (for students with family income less than 1.85 times the poverty line). In Central Harlem CSD 5 the *only middle school* at or above the citywide

grade-level Common Core proficient averages is the highly praised *Columbia Secondary School*, 91.2 percent of sixth graders, 76.6 percent of seventh graders, and 51.0 percent of eighth graders met or exceeded math proficiency. ***All other CSD 5 sixth graders had a Common Core math proficient rate of 7.8 percent, seventh graders 2.8 percent, and eighth graders 6.9 percent. .***

In Queens CSD 26, located in close proximity to the wealthy Nassau County suburbs, 62.2 percent of sixth graders, 63.3 percent of seventh graders, and 64.0 percent of eighth graders scored at Common Core proficient. By contrast, in CSD 29, located in the majority black neighborhoods of Hollis Queens, 18.8 percent of sixth graders, 13.3 percent of seventh graders, and 15.8 percent of eighth graders are Common Core proficient. In Brooklyn's middle income CSD 20, located within the neighborhoods of Borough Park and Dyker Heights, fifty-five percent of sixth graders, 42.3 percent seventh graders, and 44.3 percent of eighth graders scored at Common Core proficient. At the same time, in CSD 16, located in the lower income black neighborhood of Bedford-Stuyvesant, ***only 8.8 percent of sixth graders, 4.1 percent of seventh graders, and 6.5 percent of eighth graders scored at Common Core proficient.***

Table VI.2 show Common Core proficiency gaps by selected Community School Districts.

- In Manhattan CSD 2/CSD 5 *Common Core proficiency gap*, in the sixth-grade, is 44.2 percentage points, 42.2 points in seventh-grade, and 41.2 percentage points in the eighth-grade;<sup>44</sup>
- In Queens CSD 26/CSD 29 *Common Core proficiency gap*, in the sixth-grade, is 43.4 percentage points, 50.0 points in seventh-grade, and 48.2 percentage points in the eighth-grade;
- In Brooklyn CSD 20/CSD 16 *Common Core proficiency gap*, in the sixth-grade, is 45.7 percentage points, 38.2 points in seventh-grade, and 37.8 percentage points in the eighth-grade;

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<sup>44</sup> *Columbia Secondary School* is excluded from averages

Table VI.1  
New York City Community School Districts  
Percentage of Middle Schools Common Core Math Proficiency Rates at or above  
New York City Averages

<b>Community School Districts</b>	<b>Grade 6</b>	<b>Grade 7</b>	<b>Grade 8</b>
Manhattan CSD 1	45.4	40.0	50.0
Manhattan CSD 2	57.1	71.4	71.4
Manhattan CSD 3	42.1	31.5	36.8
Manhattan CSD 4	23.5	17.6	25.0
Manhattan CSD 5	1.0	1.0	1.0
Manhattan CSD 6	26.3	21.0	26.3
Bronx CSD 7	1.0	1.0	0
Bronx CSD 8	17.6	11.7	17.6
Bronx CSD 9	16.6	17.3	21.7
Bronx CSD 10	16.6	11.1	18.5
Bronx CSD 11	35.0	22.7	19.0
Bronx CSD 12	0	0	10.5
Brooklyn CSD 13	18.1	0	16.6
Brooklyn CSD 14	1.0	1.0	1.0
Brooklyn CSD 15	45.4	27.2	28.6
Brooklyn CSD 16	0	0	0
Brooklyn CSD 17	22.2	10.0	30.0
Brooklyn CSD 18	11.1	22.2	11.1
Brooklyn CSD 19	21.4	13.3	20.0
Brooklyn CSD 20	85.7	85.7	85.7
Brooklyn CSD 21	68.7	50.0	62.5
Brooklyn CSD 22	33.3	33.3	44.4
Brooklyn CSD 23	11.7	10.5	1.0
Queens CSD 24	73.3	84.6	76.9
Queens CSD 25	85.7	85.7	92.8
Queens CSD 26	100	100	100
Queens CSD 27	47.8	47.8	45.4
Queens CSD 28	66.7	50.0	50.0
Queens CSD 29	23.5	11.7	18.7
Queens CSD 30	50.0	50.0	64.2
Staten Island CSD 31	61.5	61.5	61.5
Brooklyn CSD 32	11.1	20.0	22.2

Table VI.2 Common Core Proficiency Gap by Selected Community School District			
Manhattan	<b>6<sup>th</sup> Grade</b>	<b>7<sup>th</sup> Grade</b>	<b>8<sup>th</sup> Grade</b>
CSD 2	52.0	45.0	48.1
CSD 5	7.8	2.8	6.9
<b>Common Core Gap</b>	<b>44.2</b>	<b>42.2</b>	<b>41.2</b>

Brooklyn

CSD 20	54.5	42.3	44.3
CSD 16	8.8	4.1	6.5
<b>Common Core Gap</b>	<b>45.7</b>	<b>38.2</b>	<b>37.8</b>

Queens

CSD 26	62.2	63.3	64.0
CSD 29	18.8	13.3	15.8
<b>Common Core Gap</b>	<b>43.4</b>	<b>50.0</b>	<b>48.2</b>

## VII. Common Core Math Proficiency by School Sector

New York City charter school organizations have long made a practice of ranking its schools against traditional public schools.<sup>45</sup> In fact, much of the support for charter school expansion is the result of a commonly held wisdom that, on average, charter school students tend to have higher proficient rates on standardized assessments than students from traditional public schools. Proponents further suggest that charter school's academic proficiency advantage is greater in schools where a higher percentage of students are black and Hispanic. To contrast the performance of demographically similar traditional and charter middle schools, this section compares 2013 Common Core math proficient rates at each grade between the top performing charter schools and the top performing "majority-minority" middle schools. A "majority-minority" school is a traditional public middle school where a majority of the student population is black and/or Hispanic.

Table VII.1 shows that after adoption of the more rigorous Common Core standards math proficiency rates drop dramatically across both "majority-minority" and charter school sectors, and for all grade levels. In the sixth grade, the steepest drops in traditional "majority-minority" middle schools occurred at:

- *P.S. 171 Patrick Henry* from a 2012 proficient rate of 97.6 to a 2013 Common Core math proficient rate of 36.6 percent, a decline of 61 percentage points.
- *East New York Family Academy* from 98.0 percent to 43.7 percent, a decline of 54.3 percentage points
- *The Mott Hall School* from 90.3 percent to 38.6 percent, a decline of 51.7 percentage points
- *Science, Technology, and Research Early College* from 87.3 percent to 37.1 percent, a decline of 50.2 percentage points

The steepest drops in sixth grade charter middle schools occurred at:

- *Renaissance Charter School* from 88.9 percent to 34.0 percent, a decline of 54.9 percentage points
- *Family Life Academy Charter School* from 80.0 percent to 34.0 percent, a decline of 46.0 percentage points

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<sup>45</sup> New York City Charter School Center, The State of the NYC Charter School Sector 2012, available at, <http://c4258751.r51.cf2.rackcdn.com/state-of-the-sector-2012.pdf>

- *Harlem Children Zone/Promise Zone Charter School* from 82.3 percent to 39.0 percent, a decline of 43.3 percentage points

The steepest drops in seventh grade traditional “majority-minority” middle schools occurred at:

- *J.H.S. 383 Philippa Schuyler* from 89.9 percent to 19.5 percent, a decline of 70.4 percentage points
- *M.S. 224 Manhattan East School for Arts & Academics* from 77.2 percent to 21.9 percent, a decline of 55.3 percentage points
- *East New York Family Academy* from 95.7 percent to 44.9 percent, a decline of 50.8 percentage points

In seventh grade, charter middle schools steepest drops occurred at:

- *Harlem Village Academy Charter School* from 100 percent to 21.3 percent, a decline of 78.7 percentage points
- *Harbor Science and Arts Charter School* from 79.3 percent to 7.1 percent, a decline of 72.2 percentage points
- *KIPP STAR Charter School* from 79.7 percent to 14.4 percent, a decline of 65.3 percentage points
- *Bronx Charter School for Excellence* from 96.0 percent to 33.3 percent, a decline of 62.7 percentage points
- *KIPP Infinity Charter School* from 89.5 percent to 29.1 percent, a decline of 60.4 percentage points

The steepest drops in eighth grade traditional “majority-minority” middle schools occurred at:

- *East New York Family Academy* from 95.5 percent to 35.6 percent, a decline of 59.9 percentage points
- *Comprehensive Model School Project M.S. 327* from 81.4 percent to 22.8 percent, a decline of 58.6 percentage points
- *Science, Technology, and Research Early College* from 83.6 percent to 30.6 percent, a decline of 53.0 percentage points
- *M.S. 224 Manhattan East School for Arts & Academics* from 78.2 percent to 29.9 percent, a decline of 48.3 percentage points



In eighth grade, charter middle steepest drops occurred at:

- *Family Life Academy Charter School* from 93.5 percent to 27.5 percent, a decline of 66.0 percentage points
- *Harlem Village Academy Charter School* from 91.9 percent to 27.4 percent, a decline of 64.5 percentage points
- *Icahn Charter School* from 100 percent to 46.7 percent, a decline of 53.3 percentage points
- *KIPP STAR Charter School* from 81.1 percent to 27.9 percent, a decline of 53.2 percentage points

Table VII.2 show the combined middle schools rankings based on the 2013 Common Core math assessment. The top five sixth grade “majority-minority” middle schools are:

1. 91.2 percent, *Columbia Secondary School*
2. 87.5 percent, *P.S. 235 Lenox School*
3. 77.4 percent, *Queens Gateway to Health Science Secondary School*
4. 72.3 percent, *TAG Young Scholars*
5. 64.6 percent, *Medgar Evers College Preparatory School*

The top five sixth grade charter middle schools are:

1. 83.0 percent, *Harlem Success Academy Charter School*
2. 77.1 percent, *Icahn Charter School*
3. 71.9 percent, *Icahn Charter School 2*
4. 69.6 percent, *Achievement First East New York Charter School*
5. 67.5 percent, *Williamsburg Collegiate Charter School*

Table VII.3 shows that the top five seventh grade “majority-minority” middle schools are:

1. 80.6 percent *P.S. 235 Lenox School*
2. 76.3 percent *Columbia Secondary School*
3. 72.5 percent *All City Leadership Secondary School*
4. 72.5 percent *TAG Young Scholars*
5. 69.3 percent, *Queens Gateway to Health Science Secondary School*

The top five seventh grade charter middle schools are:

1. 88.6 percent, *Harlem Success Academy Charter School*

2. 69.1 percent, *Williamsburg Collegiate Charter School*
3. 66.7 percent, *Brooklyn East Collegiate Charter School*
4. 65.5 percent, *Icahn Charter School*
5. 62.5 percent, *Ocean Hill Collegiate Charter School*

Table VII.4 shows that the top five eighth grade “majority-minority” middle schools are:

1. 75.2 percent, *Queens Gateway to Health Science Secondary School*
2. 73.2 percent, *I.S. 392*
3. 71.1 percent, *TAG Young Scholars*
4. 69.7 percent, *P.S. 235 Lenox School*
5. 63.1 percent, *Medgar Evers College Preparatory School*

The top five eighth grade charter middle schools are:

1. 82.4 percent, *Williamsburg Collegiate Charter School*
2. 80.3 percent, *Achievement First Endeavor Charter School*
3. 80.3 percent, *Achievement First Bushwick Charter School*
4. 66.2 percent, *Achievement First East New York Charter School*
5. 60.9 percent, *Achievement First Crown Heights Charter School*

*For a complete list of all “majority-minority” middle schools, See [Appendix VII.1](#).  
For a complete list of all charter middle schools, See [Appendix VII.2](#)*

Table VII.1 Top Combined “Minority-Majority” and Charter Middle Schools Largest Decline in Math Proficiency Rate (2012 to 2013)			
<b>Grade 6<sup>th</sup></b>	<b>2012</b>	<b>2013</b>	<b>Percent Change</b>
<b>P.S. 171 Patrick Henry</b>	97.6	36.6	-61.0
Renaissance Charter School	88.9	34.0	-54.9
<b>East New York Family Academy</b>	98.0	43.7	-54.3
<b>The Mott Hall School</b>	90.3	38.6	-51.7
<b>Science, Technology and Research Early College</b>	87.3	37.1	-50.2
<b>M.S. 224 Manhattan East School for Arts &amp; Academics</b>	82.3	34.2	-48.1
<b>Frederick Douglass Academy VIII Middle School</b>	85.1	38.4	-46.7
Family Life Academy Charter School	80.0	34.0	-46.0
<b>J.H.S. 383 Philippa Schuyler</b>	83.7	40.3	-43.4
Harlem Children Zone/Promise Academy II	82.3	39.0	-43.3
<b>Grade 7<sup>th</sup></b>	<b>2012</b>	<b>2013</b>	<b>Percent Change</b>
Harlem Village Academy Charter School	100	21.3	-78.7
Harbor Science and Arts	79.3	7.1	-72.2
<b>J.H.S. 383 Philippa Schuyler</b>	89.9	19.5	-70.4
KIPP STAR Charter School	79.7	14.4	-65.3
Bronx Charter School for Excellence	96.0	33.3	-62.7
KIPP Infinity Charter School	89.5	29.1	-60.4
<b>M.S. 224 Manhattan East School for Arts &amp; Academics</b>	77.2	21.9	-55.3
Girls Preparatory Charter School New York City	72.9	22.1	-50.8
<b>East New York Family Academy</b>	95.7	44.9	-50.8
Harlem Children Zone/Promise Academy II	76.5	26.3	-50.2
<b>Grade 8<sup>th</sup></b>	<b>2012</b>	<b>2013</b>	<b>Percent Change</b>
Family Life Academy Charter School	93.5	27.5	-66.0
Harlem Village Academy Charter School	91.9	27.4	-64.5
<b>East New York PFamily Academy</b>	95.5	35.6	-59.9
<b>Comprehensive Model School Project M.S. 327</b>	81.4	22.8	-58.6
Icahn Charter School	100	46.7	-53.3
KIPP STAR Charter School	81.1	27.9	-53.2
<b>Science, Technology and Research Early College</b>	83.6	30.6	-53.0
<b>M.S. 224 Manhattan East School for Arts &amp; Academics</b>	78.2	29.9	-48.3
<b>J.H.S. 383 Philippa Schuyler</b>	89.9	19.5	-44.1
<b>Frederick Douglass Academy VIII Middle School</b>	67.6	29.2	-38.4

Traditional “Majority-Minority” School in Bold

Table VII.2  
Top Ranking Middle Schools  
Traditional “Majority-Minority” and Charter Middle Schools  
(6<sup>th</sup> Grade)

<b>School Name</b>	<b>Proficiency Rate</b>
1. <b>Columbia Secondary School</b>	91.2
2. <b>P.S. 235 Lenox School</b>	87.5
3. Harlem Success Academy Charter School	83.0
4. <b>Queens Gateway to Health Science Secondary School</b>	77.4
5. Icahn Charter School	77.1
6. <b>TAG Young Scholars</b>	72.3
7. Icahn Charter School 2	71.9
8. Achievement First East New York Charter School	69.6
9. Williamsburg Collegiate Charter School	67.5
10. Leadership Preparatory Bedford Stuyvesant	64.7
11. <b>Medgar Evers College Preparatory School</b>	64.6
12. <b>York Early College Academy</b>	64.2
13. KIPP Infinity Charter School	63.6
14. Bronx Charter School for Excellence	58.2
15. <b>Comprehensive Model School Project M.S. 327</b>	57.8
16. Icahn Charter School 3	57.6
17. Harlem Village Academy Charter School	56.6
18. <b>IS 392</b>	54.8
19. <b>PS/MS 194</b>	54.6
20. <b>PS/IS 208</b>	54.5
21. Girls Preparatory Charter School N.Y.	54.0
22. Brooklyn Prospect Charter School	53.4
23. Achievement First Bushwick Charter School	53.3
24. Our World Neighborhood Charter	53.2
25. <b>All City Leadership Secondary School</b>	52.5
26. KIPP Academy Charter School	48.5
27. Achievement First Endeavor Charter School	47.7
28. Brooklyn East Collegiate Charter School	47.7
29. <b>New Voices School of Academic &amp; Creative Arts</b>	47.7
30. <b>City College Academy of the Arts</b>	46.8

**Traditional “Majority-Minority” School in Bold**

Table VII.3  
Top Ranking Middle Schools  
Traditional “Majority-Minority” and Charter Middle Schools  
(7<sup>th</sup> Grade)

<b>School Name</b>	<b>Proficiency Rate</b>
1. Harlem Success Academy Charter School	88.6
2. <b>P.S. 235 Lenox School</b>	80.6
3. <b>Columbia Secondary School</b>	76.6
4. <b>All City Leadership Secondary School</b>	76.3
5. <b>TAG Young Scholars</b>	72.5
6. <b>Queens Gateway to Health Science Secondary School</b>	69.3
7. <b>PS/MS 004</b>	64.6
8. Williamsburg Collegiate Charter School	69.1
9. Brooklyn East Collegiate Charter School	66.7
10. <b>Medgar Evers College Preparatory School</b>	65.9
11. Icahn Charter School 2	65.5
12. Ocean Hill Collegiate Charter School	62.5
13. <b>Mott Hall II</b>	57.9
14. Leadership Prep Bedford Stuyvesant Charter School	56.0
15. <b>The Mott Hall School</b>	54.7
16. <b>I.S. 392</b>	52.0
17. Renaissance Charter School	51.9
18. Achievement First Bushwick Charter School	48.3
19. <b>P.S. 171 Patrick Henry</b>	47.0
20. <b>Comprehensive Model School Project M.S. 327</b>	46.6
21. KIPP Academy Charter School	46.0
22. Excellence Charter School of Bedford Stuyvesant	45.2
23. <b>East New York Family Academy</b>	44.9
24. Icahn Charter School	44.4
25. Achievement First East New York Charter School	44.4
26. Explore Charter School	43.6
27. Kings Collegiate Charter School	42.3
28. <b>Science, Technology and Research Early College</b>	41.5
29. Coney Island Preparatory Public Charter	41.2
30. <b>Hostos-Lincoln Academy of Science</b>	41.2

**Traditional “Majority-Minority” School in Bold**

Table VII.4  
Top Ranking Middle Schools  
Traditional “Majority-Minority” and Charter Middle Schools  
(8<sup>th</sup> Grade)

<b>School Name</b>	<b>Proficiency Rate</b>
1. Williamsburg Collegiate Charter School	82.4
2. Achievement First Endeavor Charter School	80.3
3. Achievement First Bushwick Charter School	80.3
4. <b>Queens Gateway to Health Science Secondary School</b>	75.0
5. <b>I.S. 392</b>	73.2
6. <b>TAG Young Scholars</b>	71.7
7. <b>P.S. 235 Lenox School</b>	69.7
8. Achievement First East New York	66.2
9. <b>Medgar Evers College Preparatory School</b>	63.1
10. Achievement First East New York	60.9
11. Brooklyn Prospect Charter School	58.7
12. Brownsville Collegiate Charter School	57.9
13. KIPP Infinity Charter School	57.6
14. KIPP Academy Charter School	56.5
15. Excellent Charter School Bedford Stuyvesant	56.5
16. <b>PS/MS 004</b>	55.9
17. Coney Island Preparatory Public Charter	53.7
18. Hellenic Classical Charter	52.0
19. <b>All City Leadership Secondary School</b>	51.4
20. <b>Columbia Secondary School</b>	51.0
21. <b>The Mott Hall School</b>	50.9
22. Harbor Science and Arts	50.0
23. Icahn Charter School	46.7
24. <b>P.S. 171 Patrick Henry</b>	46.3
25. <b>Paula Hedbauny School</b>	44.4
26. IS 125 Thom J. McCann Woodside	44.1
27. The Equity Project Charter School	43.4
28. Harlem Village Academics Leadership Charter School	43.3
29. <b>Mott Hall III</b>	42.6
30. JHS 382 Phillippa Schuyler	41.3

**Traditional “Majority-Minority” School in Bold**

## **VIII. Discussion of Findings**

Results from the National Urban Research baseline assessment of New York City’s large-scale Common Core middle school math implementation inform several questions regarding the intersections of race, poverty, and place.

**First, it is clear that race matters.** The majority of the New York City public school system middle school student population is black and Hispanic. A pattern emerges where Asian students have higher proficient rates than all other peer groups. White students surpass black and Hispanic students, and Hispanic students slightly outperform black students. Asian students are nearly four times and white students three times as likely as black and Hispanic students to have Common Core math assessment scores at or above proficiency. More alarming, at each grade, black and Hispanic students are between three and four times more likely than their Asian or white counterparts to score at Level 1 “well below” math proficient. Undeniably, left unchecked, the lack of demonstrated knowledge of the skills, and practices embodied by the New York Common Core Learning Standards for Mathematics will follow low performing black and Hispanic middle school students into high school. Common Core equity necessitates targeted interventions and innovative strategies to accelerate the learning curve for students considered “partial but insufficient” or “insufficient” for grade-level expectations.

**Second, the racial composition of the middle school matters.** The majority of Asian schools had the highest scores where 100 percent of all middle school grade-levels scored at or above New York City math proficient averages. Majority white schools had 95 percent of sixth grade, 88 percent of seventh grade, and 88 percent of eighth grade scoring at or above the citywide grade-level averages. A scant 16.0 percent of majority Hispanic schools sixth grade, 9.8 percent of seventh grade, and 12.5 percent in eighth grade scored at or above the citywide Common Core grade-level averages. A meager 12.8 percent majority black schools sixth grade, 9.5 percent of seventh grade, and 13.6 percent in eighth grade scored at or above the citywide Common Core grade-level averages. A feasible explanation for such bleak racial differences is the fact that students in majority black and Hispanic schools have a better than average chance of ending up in a classroom where the teacher lacks basic mastery of the six instructional shifts required by the Common Core.

**Third, it is apparent that poverty matters.** Any attempt towards Common Core equity must take into consideration the powerful effects of poverty on academic achievement. Students lacking basic proficiency often have the most needs, struggling with chronic poverty, dysfunctional family dynamics while attending classrooms in a constant state of academic failure. Middle schools in the borough of the Bronx are located in the poorest Congressional District in the country where 67.3 percent of all residents and 72.3 percent of all children live in areas of concentrated poverty. The Bronx had the lowest proportion of students scoring at or above Common Core math proficiency. Nearly **ninety percent** of students at each grade level have no more than “*partial but insufficient*” or “*insufficient*” basic understanding of grade-level Common Core math concepts. These trends are similar to those found in high poverty neighborhoods of Brooklyn (Central Brooklyn) and Manhattan (Central Harlem). Students in high poverty neighborhoods and low proficient schools are also more likely to have teachers with Unsatisfactory Ratings (U-Rating).<sup>46</sup> The educational system has a moral and legal obligation to students, including those who are living in poverty, homeless, English learners, or otherwise at risk of not meeting learning standards benchmarks.

**Fourth, Community School District matters.** On first glance, a pattern comes into view where classrooms in higher income New York City Community School Districts have **more students** who are Common Core proficient. On second glance, a pattern comes into view where classrooms in lower income Community School Districts have **fewer students** who are proficient. *Education Redlining in New York City*, a study conducted by the Schott Foundation for Public Education, documented that students in higher income Community School Districts are more than twice as likely to have experienced and highly educated teachers (those with Master’s degrees plus 30 hours or more of further education) compared to students in lower income Community School Districts.<sup>47</sup> Instead of highly qualified math instruction, students in high-need schools are more likely to attend classrooms taught by inexperienced teachers often from an alternative certification program. A fundamental element of any strategies to increase math proficiency, at a minimum, demands students have access to high quality instruction.

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<sup>46</sup> StudentFirstNY: Unsatisfactory: The Distribution of Teacher Quality in New York City, available at <http://www.studentsfirstny.org/SFNY-Unsatisfactory-Report.pdf>

<sup>47</sup> See, A Rotting Apple: Education Redlining in New York City, Community School District Teaching Resources Appendix, p. 169, available at <http://schottfoundation.org/drupal/docs/redlining-full-report.pdf>



**Fifth, and perhaps the most compelling discovery, there is considerable evidence to be apprehensive of claims of a general failure of traditional middle schools or the academic superiority of charter schools.** While New York Common Core math is more rigorous, in both traditional and charter sectors, individual “best practice” middle schools have succeeded in meeting the demands of the learning standards. These schools provide empirical confirmation that race and socioeconomic status alone does not have to determine Common Core math destiny. Markedly, a number of “majority-minority” traditional middle schools recorded Common Core math proficient rates often surpassing their neighboring charter schools and equaling the performance of higher incomes districts in places such as Nassau County’s Great Neck, Roslyn, Long Island, and Westchester Scarsdale. Instead of the vociferous tone of an increasingly weary, politicized, and unproductive debate, it is essential to appreciate, comprehend and replicate the Common Core math implementation strategies used in effective teaching charter and traditional “minority-majority” classrooms.

## Conclusion

New York Common Core State Standards for Mathematics identifies six major shifts in middle school math instruction. First, the standards advance the notion of *focus*: Teachers “*focus deeply on only the concepts that are prioritized in the standards so that students reach strong foundational knowledge and deep conceptual understanding and are able to transfer mathematical skills and understanding across concepts and grades.*”

- A second instructional shift, *coherence* puts emphasis on showing the vertical linkage of math concepts from one grade to the next building through a logical progression where “*each standard is not a new event, but an extension of previous learning.*”
- A third shift, *fluency*, expects students “*to have speed and accuracy with simple calculations; teachers structure class time and/or homework time for students to memorize, through repetition, core functions such as multiplication tables so they are more able to understand and manipulate more complex concepts.*”
- *Deep understanding*, the fourth shift, is a pedagogical approach firmly in the “*problem-solving view of mathematics*” rewarding a student’s ability to describe the best process for reaching the solution, not simply providing the correct answer.
- The fifth specific change to math teaching is *concept applications* where students “*use math and choose the appropriate concept for application even when they are not prompted*” and teachers provide “*opportunities at all grade levels for students to apply math concepts in ‘real world’ situations.*”
- The final instructional shift is *dual intensity*. *Students are practicing and understanding. There is more than a balance between these two things in the classroom--both are occurring with intensity. Teachers create opportunities for students to participate in “drills” and make use of those skills through extended application of math concepts.*<sup>48</sup>

Beginning in 2014, transition to the Common Core Regents Examination includes standardized assessments in Algebra I, Geometry in 2015, and Algebra II in 2016.<sup>49</sup> Given that students are to be held accountable for meeting Common Core math learning standards, policymakers, educators, and community stakeholders are equally accountable for ensuring equitable access to “*opportunity-to-learn*” standards—including Common Core aligned curriculum and assessments,

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<sup>48</sup> Instructional Shifts for the Common Core Mathematics, available at <http://schools.nyc.gov/Academics/CommonCoreLibrary/About/InstructionalShifts/default.htm>

<sup>49</sup> See, October 11, 2013, New York State Board of Regents, Proposed amendment of Section 100.5 of Regulation of the Commissioner relating to transition to Common Core aligned Regents Examination in English and Mathematics, available at <http://www.regents.nysed.gov/meetings/2013Meetings/October2013/1013brca3.pdf>

well-prepared teachers, adequate safe facilities from which to learn, extended time to learn, and high expectation for all students.<sup>50</sup>

If properly implemented, the rigorous Common Core middle school learning standards hold the promise of elevating the mathematical knowledge and skills of every student in every classroom to levels competitive with the best in the world. Let us assume that the 2013 Common Core math assessments are sensible proxies for grade-level expectations. Then too many students in the New York City public school system are not prepared to meet the rigorous learning benchmarks. This is particularly the case for black students, Hispanic students, and students living in poverty. It will take a sustained effort for all students to realize the goal of “college-and-career readiness” offered by the Common Core. Now, the challenge is to ensure quality implementation at the community school district, school building, classroom, and individual student levels. If this link is broken at any stage, fissures between the Common Core promise and what students actual receive will remain.

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<sup>50</sup> For excellence review of “opportunity-to-learn standards” see, Darling-Hammond, L. (2000), New Standards and Old Inequalities: School Reform and the Education of African American Students, *Journal of Negro Education*, 69 (4), 263-289.

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