



The New York City Department of Education



Quality Review Report

Isaac Newton Middle School for Math and Science

**Middle School 825
280 Pleasant Avenue
New York
NY 10029**

Principal: Lisa Nelson

Dates of review: April 9 - 10, 2008

Lead Reviewer: Jo Cheadle

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Part 1: The school context

Information about the school

Isaac Newton is a middle school with 365 students from grade 6 through grade 8. The school population comprises 23% Black, 75% Hispanic and 2% from other ethnic groups. The student body includes 12% English language learners and 16% special education students. Boys account for 53% of the students enrolled and girls account for 47%. The average attendance rate for the school year 2006 - 2007 was 91.5%. The school is in receipt of Title 1 funding with 69% eligibility.

Part 2: Overview

What the school does well

- The principal provides inspirational leadership and has an impeccably clear vision of what the school should be like.
- Dedicated and capable members of staff share the principal's vision and are committed to its realization.
- The school's goals for long-term improvement are exceptionally well communicated and understood.
- The school makes useful and relevant analysis of data, leading to a very good understanding of individual student needs.
- Leaders and teachers work with high levels of mutual trust and collaboration to ensure that they provide good experiences for students.
- Teachers match their teaching strategies very closely to students' academic needs, learning styles and personal interests.
- The curriculum for both core and extended learning is motivating, relevant and interesting.
- The school rightfully places equal emphasis on the development of students' personal development alongside academic gains.
- There are very good opportunities for personal development that support individual needs and the achievement of school wide priorities.
- Good links with a range of useful external partners effectively support professional development and student learning.

What the school needs to improve

- Improve the analysis of progress made by special education students to ensure that their gains are clearly understood and needs fully met.
- Ensure that students and their parents are consistently aware of the short-term "next step" goals for learning.
- Firmly embed the processes for measuring progress on a regular basis to enable timely amendment and adaptation of action plans.
- Wherever possible, think of innovative ways to encourage greater parental involvement in the day-to-day life of the school.

Part 3: Main Findings

Progress made since the last review

The school has made good progress in addressing the issues identified in the previous Quality Review report.

Overall Evaluation

This school is proficient.

At Isaac Newton Middle School, there is a palpable sense of common purpose and intent. Members of staff are totally supportive of the principal and share her educational ideals and absolute belief in students' potential to achieve well. Under the guidance of this inspirational leader, the school has worked its way out of difficulties, maintained a good reputation in the local community and built a firm foundation for future success. Leaders and faculty have a very good understanding of the school's current effectiveness. There are no attempts to hide where things need to improve. Similarly, strengths of the team are celebrated and nurtured. Very good professional development opportunities build further capacity, allowing the school to make realistic plans for future developments. The school has embraced the use of data to encourage greater efficiency in their work. Their understanding of the needs of individual students is very good as a result. However, leaders accept that closer analysis of how special education students perform must guide future programming to meet their needs consistently well.

Teachers are motivated and enthusiastic about their work and care greatly for the students. Productive relationships between students and staff members ensure every student has at least one adult to turn to at times of need. There are very high levels of collaboration among all staff members to ensure that planning, goal setting and assessment are consistently useful. Data analysis guides all aspects of professional dialogue and decision-making. Currently however, goal setting is not as specific as it could be to derive easily measurable "next-step" goals for learning from students' long-term goals. This means that students are not meaningfully involved in assessing their own progress over short time periods. Similarly, the school misses a valuable opportunity to involve parents by sharing these goals with them and encouraging their support at home.

The school's inquiry team is working effectively. The team's focus has been on a group of 14 students who narrowly missed making annual yearly progress in math. Useful discussion and appropriate planning for intervention strategies are positively influencing student gains. Enhanced use of data and clarity in understanding the conclusions drawn from data has effectively supported the team's work. There has been a marked improvement in data analysis since the last Quality Review. From analysis, leaders have established measurable whole-school goals. Expectations about student outcomes have risen as a result. Regular professional dialogue regarding student progress and achievement is of high quality and valued by all. Leaders now make plans for the school's future work based on critical evaluation of how far the school has made progress towards overall goals and which aspects of past work have had most positive impact.

How well the school meets New York City's evaluation criteria

Quality Statement 1 – Gather Data: School leaders and faculty consistently gather data and use it to understand what each student knows and is able to do and to monitor the student's progress over time.

This area of the school's work is proficient.

As a small school, staff knowledge of individual students is very good. Moreover, the school's extended use of data has enabled an even closer "lens" on each student regarding their academic successes and potential. The school now regularly collects relevant data from a range of assessment sources. From these assessments, leaders build updated information regarding performance and outcomes. The school has made good use of predicative tests to establish where additional support has been necessary for State test preparation. They are confident that test scores will improve. Revitalized tracking of performance within grade levels has created a "shared vocabulary" for professional dialogue between colleagues. Grade binders, containing past and recent assessments, are a useful start to rigorous and regular analysis and use of data. Most importantly, data analysis has enabled the school to identify gaps in students' literacy skills that mar their potential achievement in all subjects. In particular, the school has responded seriously to analysis pertaining to boys' underachievement in reading. A boys' reading group has been set up and there have been good efforts to instil better attitudes to reading as a whole. Using the book "Letter to a Brother", students have identified inspiring messages for life that are displayed in corridors for all to read. Understanding the need to improve literacy skills overall has also positively influenced curriculum planning across all subjects.

The school's population includes a growing number of English language learners. Leaders have made good analysis of language proficiency tests and adjusted scheduling to maximise intervention for these students. Results show that within the current supported group, 12 out of 17 students have already moved up one level in their English grades. The school has a clear view of how data analysis is guiding their work and there is agreement on the "why, how and ways to use?" processes of data generation, collection and interpretation. Teachers are invigorated by the patterns and trends data enables them to establish. There is a very clear picture of where the school has come from and its current status as a result. As yet, close analysis of more widespread student sub-groups is in initial stages. The school is also aware that very close attention must be paid to data pertaining to special education students. As a middle school, staff members recognize the responsibility to quickly identify the best ways to support a wide range of special educational needs. Through appropriate intervention, teachers are committed to helping students move on to high school with the best possible levels.

Quality Statement 2 – Plan and Set Goals: School leaders and faculty consistently use data to understand each student's next learning steps and to set suitably high goals for accelerating each student's learning.

This area of the school's work is proficient.

Leaders communicate established priorities very clearly to staff. It is evident that teachers embrace these priorities and align their work in to achieve the school's long-

term goals. There are very good levels of professional collaboration throughout the school. This enables discussion where staff members translate the priorities into specific goals for grade levels and within subjects. The result is that classroom work, bulletin board displays and meetings between teachers focus heavily on the use of extended vocabulary and accurate writing skills. This was exemplified in a social studies lesson when time was effectively spent developing the language necessary to talk and understand the theme of the second World War, before any new learning related directly to the historical period took place. Such examples illustrate the ways in which teachers support students with the greatest level of need, particularly English language learners. The missing step in this process is in the consistent translation of goals to individual student level. Currently there are limited examples of specific “next step” goals for learning that give students the opportunity to realistically measure their own progress. The school has no procedures for sharing these short-term goals with parents either, neglecting an opportunity to communicate with parents to support learning at home. The school understands the power of parental contribution and appreciates the support of a committed group of parents who contribute regularly. The school shares high expectations for student outcomes with parents. Leaders are also aware that they must reach out to the parents who contribute less regularly in order to fulfill high expectations for all students. There is a determination to reach out to more parents in new and innovative ways to encourage easy and appropriate participation.

Quality Statement 3 – Align Instructional Strategy to Goals: The school aligns its academic work, strategic decisions and resources, and effectively engages students around its plans and goals for accelerating student learning.

This area of the school’s work is well developed.

The school’s strong team of administrative, teaching and support staff work in extremely close professional harmony. They share a common belief that every student has the potential to reach their goals, but the “path may be very different for each of them”. Leaders and faculty have a clear understanding that they must carefully match teaching to students’ academic needs, learning styles and personal interests. In order to ensure this happens with increasing consistency in classrooms, leaders appreciate that there is much “surprise giving”. They are very aware that staff gives generously of their time and effort, to differentiate the curriculum and ensure that learning is relevant and meaningful to students. The school has moved away from a “test driven” curriculum to one that develops the skills and knowledge that students need to learn effectively and be successful in mandated tests. Lessons are practical, involve various student groupings and meaningful links are made between subjects. A math department meeting held during the Quality Review exemplified the school’s approach to differentiated activities, when a teacher explained how she had tape-recorded the main vocabulary and task instructions to enable a student to complete homework. Leaders’ wise financial decisions regarding the purchase of interesting and plentiful resources not only inspire students to want to learn, but also inspire teachers to create motivating and engaging lessons. In addition, the school has a range of extended activities that supplement the core curriculum. These include yoga, knitting club, “Double Dutch”, cooking and geology. There are also after-school enrichment activities to challenge the highest achieving students in math. The school’s “curriculum menu”, supported by very good relationships, ensures that the vast majority of students enjoy coming to school, speak highly of their teachers and the principal and exhibit courteous and pleasant attitudes.

Quality Statement 4 - Align Capacity Building to Goals: The development of leadership, teachers and other staff capacity is aligned to the school's collaboratively established goals for accelerating the learning of each student.

This area of the school's work is well developed.

As one teacher says, "This is an exciting time to be at Isaac Newton". Teachers are very happy that professional development not only supports the achievement of whole school goals, but enables each of them to develop professionally. The principal has very good knowledge of the strengths in the teaching team. She also knows where skills and knowledge must be further developed to guarantee consistency in teacher and student outcomes. Regular learning walks, involving leaders and teachers, enable progress to be measured in a very constructive way. These walks focus on agreed "principles for learning" and enable observers to record what they "notice" and pose questions about what they "wonder". "Noticings and wonderings" are shared openly with those teachers being observed. Discussions in grade groups, departments and at leadership level encourage a shared understanding of what works best in school and where improvements might be made. Teachers new to the school feel that this system, alongside the regular support offered by colleagues and administration, enables them "to blossom". Teachers who have been at the school for a long time, talk with equal appreciation of the chance to develop new skills and knowledge through very relevant training opportunities. Good links with a range of useful partners support professional development successfully. The school is currently developing the use of technology in the math curriculum through links with New York University, for whom the school acts as host for its Partnership for Teacher Excellence Program. Isaac Newton also works with Mount Sinai University to support under-represented, urban students towards careers in the medical sciences. This is one of several partnerships that strongly enhance students' personal and social development alongside academic progress.

Quality Statement 5 - Monitor and Revise: The school has structures for evaluating each student's progress throughout the year and for flexibly adapting plans and practices to meet its goals for accelerating learning.

This area of the school's work is proficient.

The principal shares her vision for how she sees the future of Isaac Newton School with impeccable clarity. In a carefully orchestrated transition from the "old Isaac Newton" to its current day equivalent, she has already achieved her personal goals to "build credibility" in her leadership and to ensure that everyone understands the vision. From various data sources, leaders establish clear goals for teacher outcomes that move the school towards realization of this vision. They fully accept that they now need to establish a clear cycle of rigorous review and evaluation to ensure that the school continues on a successful journey towards achieving goals for student outcomes. Analysis of assessment data is clearly guiding decision-making processes. The school's development plans have agreed timeframes and clear criteria for measuring success. Leaders and faculty are open to amending programs, scheduling and school procedures to ensure that improvement goals are met. They accept that they have not yet firmly embedded the processes for measuring progress on a regular basis to enable timely amendment and adaptation of action plans. However, leaders have managed change wisely and sensitively over the last year so that all staff members are now empowered to make critical, reflective and honest evaluations of whole school progress.

Part 4: School Quality Criteria Summary

SCHOOL NAME: Isaac Newton Middle School for Math and Science	Δ	▷	✓	+	◇
Quality Score			X		

Quality Statement 1 – Gather Data: School leaders and faculty consistently gather and generate data and use it to understand what each student knows and is able to do and to monitor the students progress over time.

To what extent do school leaders and faculty provide . . .	Δ	▷	✓	+	◇
1.1 an objective, constantly updated understanding of the performance and progress of each student, classroom, grade level?				X	
1.2 an objective, constantly updated understanding of the performance and progress of special education students?		X			
1.3 an objective, constantly updated understanding of the performance and progress of English language learners?			X		
1.4 an objective, constantly updated understanding of the performance and progress of ethnic groups, gender groups and all other categories of interest to the school?			X		
1.5 a measurement of performance and progress based on the school's own past performance, and among students, classrooms, grades and subject areas?				X	
1.6 a measurement of performance and progress based on comparisons with similar schools?			X		
1.7 training, management systems and structures that support teachers in the use of school data to inform planning and instruction and to track the progress of students?			X		
Overall score for Quality Statement 1			X		

Quality Statement 2 – Plan and Set Goals: School leaders and faculty consistently use data to understand each student's next learning steps and to set suitably high goals for accelerating each students learning.

To what extent do school leaders and faculty . . .	Δ	▷	✓	+	◇
2.1 engage in collaborative processes to set rigorous, objectively measurable goals for improvement, and to develop plans and timeframes for reaching those goals?				X	
2.2 focus on each student, classroom, grade level, academic subject and group of students whose performance or progress has been identified by the school as a particular focus area?			X		
2.3 identify and improve the performance and progress of those students in greatest need of improvement?			X		
2.4 share whole school goals with all members of the school community to rigorously improve the performance and progress of students?				X	
2.5 convey consistently high expectations to students and their parents/caregivers?				X	
2.6 regularly provide students and their parents/caregivers with information about the goals set for each student, and about each student's progress and performance, and how they can improve?			X		
2.7 invite and enable parents/caregivers to provide useful information to teachers and the school about the learning needs and capacities of their children?			X		
Overall score for Quality Statement 2			X		

Quality Statement 3 – Align Instructional Strategy to Goals: The school aligns its academic work, strategic decisions and resources, and effectively engages students around its plans and goals for accelerating student learning.

To what extent does the school . . .	Δ	▷	✓	+	◇
3.1 select core curricular approaches that facilitate and provide meaningful interim data about progress towards goals and focus on raising the achievement of students?				X	
3.2 provide a broad and engaging curriculum, including the arts, to enhance learning both within and outside the school day?				X	
3.3 hold teachers accountable for the progress and learning of the students in their charge, for making instruction interesting and compelling, and for creating a positive safe and inclusive learning environment?				X	
3.4 ensure that teachers use school, class and student data to plan for and provide differentiated instruction that meets the specific needs of all the students in their charge?				X	
3.5 make budgeting, staffing and scheduling decisions strategically, based on data, to meet the school's academic goals for all students?				X	
3.6 ensure that there is an environment of mutual trust and respect between all staff and students to support personal and academic development?					X
3.7 ensure that there are effective and consistently applied procedures to encourage and monitor student attendance and tardiness?			X		
Overall score for Quality Statement 3				X	

Quality Statement 4 – Align Capacity Building to Goals: The development of leadership, teachers and other staff capacity is aligned to the school’s collaboratively established goals for accelerating the learning of each student.					
To what extent does the school . . .	Δ	➤	✓	+	◇
4.1 use frequent observations of classroom teaching by the principal and other available information to develop a differentiated strategy for improving the quality of each teacher’s instruction?				X	
4.2 make professional development decisions strategically, based on data, to help meet the improvement goals of students and teachers?				X	
4.3 provide frequent opportunities for teachers to observe each other’s classroom instruction and to meet together in teams to plan, share effective practices, and evaluate one another’s instruction in an open and reflective professional environment?				X	
4.4 develop effective procedures for the induction and support of teachers who are new to the profession or the school?				X	
4.5 align youth development, guidance/advising and other student support services around stated academic and personal development goals?				X	
4.6 consistently implement clear procedures that enable the school to run smoothly and encourage effective student learning, and effectively address discipline related incidents?				X	
4.7 create effective partnerships with outside entities that support the academic and personal growth of the students?				X	
Overall score for Quality Statement 4					X

Quality Statement 5 – Monitor and Revise: The school has structures for evaluating each student’s progress throughout the year and for flexibly adapting plans and practices to meet its goals for accelerating learning.					
To what extent do . . .	Δ	➤	✓	+	◇
5.1 the school’s plans for improving student outcomes include interim goals that are objectively measurable and have suitable time frames for measuring success and making adjustments?			X		
5.2 the school’s plans for improving teacher outcomes include interim goals that are objectively measurable and have suitable time frames for measuring success and making adjustments?				X	
5.3 teachers and faculty use periodic assessments and other diagnostic tools to measure the effectiveness of plans and interventions for individual and groups of students in key areas?			X		
5.4 teachers and faculty use the information generated by periodic assessments and other progress measures and comparisons to revise plans immediately in order to reach stated goals?			X		
5.5 school leaders track the outcomes of periodic assessments and other diagnostic measures and use the results to makes strategic decisions to modify practices to improve student outcomes?			X		
5.6 school leaders and staff use each plan’s interim and final outcomes to drive the next stage of goal setting and improvement planning?			X		
5.7 the principal and school community have a clear vision for the future development of the school and implement procedures and systems to effect change?					X
Overall score for Quality Statement 5					X

◇	Outstanding
+	Well Developed
✓	Proficient
➤	Underdeveloped with Proficient Features
Δ	Underdeveloped