

U.S. Department of Education
2009 No Child Left Behind - Blue Ribbon Schools Program

Type of School: (Check all that apply) Elementary Middle High K-12 Other
 Charter Title I Magnet Choice

Name of Principal: Ms. Christine Taylor

Official School Name: Science Park High School

School Mailing Address:
260 Norfolk Street
Newark, NJ 07103-4512

County: Essex State School Code Number*: 055

Telephone: (973) 733-7588 Fax: (973) 733-8236

Web site/URL: http://www.nps.k12.nj.us/science/index.htm E-mail: ctaylor@nps.k12.nj.us

I have reviewed the information in this application, including the eligibility requirements on page 2 (Part I - Eligibility Certification), and certify that to the best of my knowledge all information is accurate.

(Principal's Signature) Date _____

Name of Superintendent*: Dr. Clifford Janey

District Name: Newark School District Tel: (973) 733-7333

I have reviewed the information in this application, including the eligibility requirements on page 2 (Part I - Eligibility Certification), and certify that to the best of my knowledge it is accurate.

(Superintendent's Signature) Date _____

Name of School Board President/Chairperson: Mr. Samuel Gonzalez

I have reviewed the information in this application, including the eligibility requirements on page 2 (Part I - Eligibility Certification), and certify that to the best of my knowledge it is accurate.

(School Board President's/Chairperson's Signature) Date _____

**Private Schools: If the information requested is not applicable, write N/A in the space.*

Original signed cover sheet only should be mailed by expedited mail or a courier mail service (such as USPS Express Mail, FedEx or UPS) to Aba Kumi, Director, NCLB-Blue Ribbon Schools Program, Office of Communications and Outreach, US Department of Education, 400 Maryland Ave., SW, Room 5E103, Washington, DC 20202-8173.

PART I - ELIGIBILITY CERTIFICATION

The signatures on the first page of this application certify that each of the statements below concerning the school's eligibility and compliance with U.S. Department of Education, Office for Civil Rights (OCR) requirements is true and correct.

1. The school has some configuration that includes one or more of grades K-12. (Schools on the same campus with one principal, even K-12 schools, must apply as an entire school.)
2. The school has made adequate yearly progress each year for the past two years and has not been identified by the state as "persistently dangerous" within the last two years.
3. To meet final eligibility, the school must meet the state's Adequate Yearly Progress (AYP) requirement in the 2008-2009 school year. AYP must be certified by the state and all appeals resolved at least two weeks before the awards ceremony for the school to receive the award.
4. If the school includes grades 7 or higher, the school must have foreign language as a part of its curriculum and a significant number of students in grades 7 and higher must take the course.
5. The school has been in existence for five full years, that is, from at least September 2003.
6. The nominated school has not received the No Child Left Behind – Blue Ribbon Schools award in the past five years, 2004, 2005, 2006, 2007, or 2008.
7. The nominated school or district is not refusing OCR access to information necessary to investigate a civil rights complaint or to conduct a district-wide compliance review.
8. OCR has not issued a violation letter of findings to the school district concluding that the nominated school or the district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan from the district to remedy the violation.
9. The U.S. Department of Justice does not have a pending suit alleging that the nominated school or the school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
10. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the school or school district in question; or if there are such findings, the state or district has corrected, or agreed to correct, the findings.

PART II - DEMOGRAPHIC DATA

All data are the most recent year available.

DISTRICT (Questions 1-2 not applicable to private schools)

1. Number of schools in the district:
- | | |
|-----------|---------------------|
| 54 | Elementary schools |
| 4 | Middle schools |
| | Junior high schools |
| 13 | High schools |
| 3 | Other |
| 74 | TOTAL |
2. District Per Pupil Expenditure: 19305

Average State Per Pupil Expenditure: 12981

SCHOOL (To be completed by all schools)

3. Category that best describes the area where the school is located:
- Urban or large central city
 Suburban school with characteristics typical of an urban area
 Suburban
 Small city or town in a rural area
 Rural
4. 18 Number of years the principal has been in her/his position at this school.
 If fewer than three years, how long was the previous principal at this school?
5. Number of students as of October 1 enrolled at each grade level or its equivalent in applying school only:

Grade	# of Males	# of Females	Grade Total	Grade	# of Males	# of Females	Grade Total
PreK			0	7	28	27	55
K			0	8	29	51	80
1			0	9	92	98	190
2			0	10	100	123	223
3			0	11	89	120	209
4			0	12	56	74	130
5			0	Other			0
6			0				
TOTAL STUDENTS IN THE APPLYING SCHOOL							887

6. Racial/ethnic composition of the school:
- | | |
|-------------------|---|
| <u>0</u> | % American Indian or Alaska Native |
| <u>3</u> | % Asian |
| <u>42</u> | % Black or African American |
| <u>32</u> | % Hispanic or Latino |
| <u>1</u> | % Native Hawaiian or Other Pacific Islander |
| <u>22</u> | % White |
| <u> </u> | % Two or more races |
| <u>100</u> | % Total |

Only the seven standard categories should be used in reporting the racial/ethnic composition of your school. The final Guidance on Maintaining, Collecting, and Reporting Racial and Ethnic data to the U.S. Department of Education published in the October 19, 2007 *Federal Register* provides definitions for each of the seven categories.

7. Student turnover, or mobility rate, during the past year: 0 %

This rate is calculated using the grid below. The answer to (6) is the mobility rate.

(1)	Number of students who transferred <i>to</i> the school after October 1 until the end of the year.	0
(2)	Number of students who transferred <i>from</i> the school after October 1 until the end of the year.	8
(3)	Total of all transferred students [sum of rows (1) and (2)].	8
(4)	Total number of students in the school as of October 1.	887
(5)	Total transferred students in row (3) divided by total students in row (4).	0.009
(6)	Amount in row (5) multiplied by 100.	0.902

8. Limited English proficient students in the school: 0 %

Total number limited English proficient 0

Number of languages represented: 0

Specify languages:

9. Students eligible for free/reduced-priced meals: 8 %

Total number students who qualify: 73

If this method does not produce an accurate estimate of the percentage of students from low-income families, or the school does not participate in the free and reduced-price school meals program, specify a more accurate estimate, tell why the school chose it, and explain how it arrived at this estimate.

10. Students receiving special education services: 2 %

Total Number of Students Served: 18

Indicate below the number of students with disabilities according to conditions designated in the Individuals with Disabilities Education Act. Do not add additional categories.

<u>0</u> Autism	<u>1</u> Orthopedic Impairment
<u>0</u> Deafness	<u>3</u> Other Health Impaired
<u>0</u> Deaf-Blindness	<u>11</u> Specific Learning Disability
<u>0</u> Emotional Disturbance	<u>2</u> Speech or Language Impairment
<u>1</u> Hearing Impairment	<u>0</u> Traumatic Brain Injury
<u>0</u> Mental Retardation	<u>0</u> Visual Impairment Including Blindness
<u>0</u> Multiple Disabilities	<u>0</u> Developmentally Delayed

11. Indicate number of full-time and part-time staff members in each of the categories below:

	Number of Staff	
	<u>Full-Time</u>	<u>Part-Time</u>
Administrator(s)	<u>9</u>	<u>0</u>
Classroom teachers	<u>65</u>	<u>0</u>
Special resource teachers/specialists	<u>4</u>	<u>3</u>
Paraprofessionals	<u>2</u>	<u>0</u>
Support staff	<u>14</u>	<u>0</u>
Total number	<u>94</u>	<u>3</u>

12. Average school student-classroom teacher ratio, that is, the number of students in the school divided by the Full Time Equivalent of classroom teachers, e.g., 22:1 14 :1

13. Show the attendance patterns of teachers and students as a percentage. Only middle and high schools need to supply dropout rates. Briefly explain in the Notes section any attendance rates under 95%, teacher turnover rates over 12%, or student dropout rates over 5%.

	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004
Daily student attendance	95%	94%	93%	93%	93%
Daily teacher attendance	95%	95%	96%	94%	95%
Teacher turnover rate	11%	7%	10%	10%	0%
Student dropout rate	0%	0%	0%	0%	0%

Please provide all explanations below.

Because our students realize the importance of education, academics, and school involvement, they know that good attendance goes in tandem with the aforementioned. For the most part, our students come to school every day eager and ready to learn. For most of our students to attend this school, they must travel far distances leaving very early in the morning to catch one or two buses to get to the location. Although there are several obstacles in attaining perfect attendance, our students do have genuine and sincere reasons why they might be absent on some days.

Science Park High School, with its stellar reputation and motivated students, in reality, is a high school which is located in an urban setting. With that, all the challenges of attending a city school exist. Among these which might hinder their attendance could include safety issues, gang activity near students' homes, and/or poor transportation on inclement weather days. Sometimes, students are kept from school because they must accompany a parent to translate in an official capacity in a court or doctor's office. Of course, long-term illness, home instruction, and other medical concerns keep our students from having great attendance.

In spite of the problems that thwart some to have perfect attendance, most of our students do maintain great attendance. After all, they know that a good education with good attendance will help them realize their dreams.

14. For schools ending in grade 12 (high schools).

Show what the students who graduated in Spring 2008 are doing as of the Fall 2008.

Graduating class size	138	
Enrolled in a 4-year college or university	85	%
Enrolled in a community college	15	%
Enrolled in vocational training	0	%
Found employment	0	%
Military service	0	%
Other (travel, staying home, etc.)	0	%
Unknown	0	%
Total	100	%

PART III - SUMMARY

In 1974 Science High was created as a “pioneering educational community to transform mathematics and science teaching and learning by developing ethical leaders who know the joy of discovery and of forging connections within and among science, math, the humanities, and the arts by...research, innovative teaching, and service.” As one of Newark’s magnet schools housed in a state-of the art building completed in 2006, Newark’s Science Park High School continues to fulfill its mission as one of the finest high schools in the state: it is consistently listed among the best high schools in New Jersey, according to NJ Monthly, and a Star-Ledger report listed SPHS as one of the ten New Jersey high schools noted most often by undergraduate admissions officers for graduating strong students. SPHS remains an educational home for Newark’s most academically talented students.

For Science Park High School, educating Newark’s strongest students begins with a selective search for students from Newark’s public and private elementary schools. Students with an interest in science and the motivation to pursue a career in the sciences are encouraged to apply. The application process includes a review of standardized test scores, admissions tests, school records and recommendations. Of the hundreds who apply for admission yearly, a scant 150 are chosen, allowing the school to maintain its rigorous academic standards and intimate atmosphere.

Our school program is designed to afford students venues in which to grow and thrive. The curriculum meets and exceeds state and district requirements for high school graduation. The science curriculum consists of eighty-six minutes daily of Earth, Space, and Life science for 9th graders, Physics for 10th graders, Chemistry for 11th graders and Biology for 12th graders. All students are required to take Algebra I and II, Geometry, Trigonometry, and Calculus. Students also take four years each of English and physical education; three years of history; a minimum of two years of a foreign language; one year of music or art and of computer science; and a semester each of SAT preparation and public speaking. Our three career academies—Pure, Applied and Behavioral Science—include many elective courses to augment the core curriculum. To assure students’ holistic development, we offer a full array of extra- and co-curricular activities.

Some of our students’ notable achievements include:

- 99.8% passing rate on all three sections of the New Jersey High School Proficiency Assessment (HSPA).
- More than 40% participation in summer enrichment programs at colleges across the nation
- 96% rate of matriculation at colleges and universities across the country, including schools such as Harvard, Princeton, Dartmouth and Yale.
- Awards of over four million dollars each year in student scholarships.
- Public recognition in state and national publications such as Time, The Star- Ledger and New Jersey Monthly for academics and athletics.

To open the world to our students, Science Park High School partners with the four institutions of higher learning in the city: UMDNJ, Rutgers, NJIT and ECC. Together with local business, these entities—our neighbors in University Heights Science Park—have united to strengthen the community and enable its youth to reach their potential. Our proximity to our partners coupled with the advantages of our new facility has enhanced the curriculum, creating a school without borders. Through problem-based learning within the school and the community, we guide our students toward true global citizenship. This approach to learning is the cornerstone of our mission, which continues to thrive and live in the minds and hearts of our students and staff. Our students launch themselves into the world armed not only with modern technology but with traditional ideas of making the world a better place through knowledge and industry.

PART IV - INDICATORS OF ACADEMIC SUCCESS

1. Assessment Results:

The HSPA (High School Proficiency Assessment) is a New Jersey state-wide assessment given to first-time 11th graders in March of each school year. The HSPA assesses student proficiency in Mathematics and in Language Arts Literacy (LAL) against the New Jersey Core Curriculum Content Standards (NJCCCS). Students are assigned to one of three proficiency levels separately for Math and for LAL. A level of “Proficient” indicates that a student meets the requirements for graduation. “Partially Proficient” indicates that a student does not meet the minimum level of achievement set for graduation. “Advanced Proficient” indicates a high level of mastery against the NJCCCS. The state of New Jersey also reports HSPA results by major demographic group.

After a thrust to raise Math HSPA results in 2004-2005, Math proficiency levels have remained steady at between 95% and 100%. The percentage of students who are Advanced Proficient in Math has also remained steady at between 38% and 46%. The LAL proficiency rate remains steady at between 98% and 100% throughout the reported period. The percentage of students Advanced Proficient in LAL increased significantly in 2005-2006, but retreated in 2007-2008. In the 2006-2007 school year Science Park HS began increasing its enrollment in order to offer its educational program to a greater number of Newark students. As a result, our enrollment has increased by over 60%. This has necessitated hiring more teachers, most new to the profession. Through professional development we are helping these new teachers master their teaching skills and bring student advanced performance to previous levels. Trends for our school’s subgroups tend to mirror those of the school as a whole.

Virtually all of Science Park High School’s graduates are college bound and therefore take the SAT. The same mathematics initiative mentioned above for HSPA increased Math scores above the national average in year 2005-2006. They have remained at or above the average since then. As is the case with HSPA, the SAT average score for Critical Reading retreated in the 2007-2008, reflecting the same growth issues outlined above.

Science Park High School also uses the PSAT as an intermediate assessment and planning tool. Traditionally, all 10th and 11th graders have been tested every year. Over the past two years, we have begun administering the PSAT to our 9th graders as well. Grade 11 PSAT results for both Mathematics and Critical Reading show a steady upward trend for our school as a whole and for each of its demographic groups. Indeed, in 2007-2008 mean Critical Reading and Math scores both exceeded their respective national means. Grade 10 PSAT results in general track at or above their respective national means.

Science Park High School has an extensive program offering students collegiate academics’. Over the past five year period, participation in the Advanced Placement program has seen a steady increase, particularly for Mathematics and English Language. In addition to an increase in the number of students taking AP courses in these subject areas (14 to 48 for English and 22 to 36 for Math), there has been a significant increase in the number of students scoring three or greater on the AP exams (6 to 19 for English and 7 to 29 in Mathematics). Overall, participation in our AP program has increased from 38 to 86 students over the reporting period. This is largely due to the use of vertical planning to improve student preparation for AP work and use of the College Board’s Instructional Planning Reports to improve AP curriculum year over year. In Mathematics we have also added AP Statistics as a course option.

2. Using Assessment Results:

Assessment results are used in a number of ways to improve curriculum and instruction. We analyze AP test results on a yearly basis to determine weaknesses in our AP Courses and to make improvements for the following year. We also use these results in conjunction with vertical planning to address issues of preparation stemming from prerequisite courses. This serves to increase the rigor of courses throughout our curriculum while increasing the number of students who qualify for AP courses and the number achieving a score of three or better. This is equally true for English and Mathematics.

We also analyze PSAT results for weaknesses relative to the SAT. In particular, the Mathematics and Language Arts departments scrutinize questions that students respond to incorrectly to determine how to help students offer better responses in the future. This has led to class room improvements such as increasing the level of critical thinking in lessons and demanding greater rigor in student work.

HSPA results are also analyzed. In particular, in New Jersey, student results are reported for subcategories called clusters (e.g. Math has four clusters: Number Sense, Spatial Sense, Probability/Statistics, and Algebra). These data are used to identify and correct weaknesses in our program relative to the NJCCCS. For example, even though our students do very well in HSPA, cluster analysis shows that they could do better with Probability. To address this, we have inserted Probability modules in our early year Mathematics classes. We also administer to 10th graders a HSPA-like diagnostic test to identify specific student issues that can be corrected through enrichment classes or extra attention in class by teachers.

3. Communicating Assessment Results:

For all standardized tests administered, students are given a copy of their ISR (Individual Student Report) to review, with their parents, and staff is given a summary of the test results. All 11th grade students take the PSAT, HSPA and SAT. All 9th and 10th grade students take the PSAT and the SPA (Standard Proficiency Assessment - a local district standardized instrument) and the 7th and 8th graders take the NJ ASK 7 & 8 respectively. In the fall teachers are expected to complete a summary sheet for each of their classes in order to highlight areas of both proficiency and deficiency and use this data to influence instruction. As part of IG PRO, our computerized grading system, teachers produce weekly printouts of student grades and share them with students and parents. Teachers have e-mail accounts by which students and parents can communicate with staff directly. Teachers also post assignments on the teacher E-board. Each marking period a progress report is sent home to parents indicating the child's academic performance to date. Report cards are distributed at Parent Conference Days which are held three times per year. PTSO (Parent, Teacher, and Student Organization) are held monthly and at each meeting the principal's report includes results of assessments, competitions and presentations. During the morning TV announcements, successes of students are shared with the school community. The school newspaper also highlights students' achievements; parents can go the school's Parent E-Board to view student performance results. At the end of each marking period, report cards are reviewed and parents of students in need of improvement are contacted and asked to come in for a meeting with the principal, teacher(s), and guidance counselor. Bulletin boards and classrooms are also used to display student work together with honor roll lists, college acceptances and awards. The school website is also used to share successes with the entire District and its community members.

4. Sharing Success:

Science Park High School is an award winning facility for its design and its successful academic programs. We are consistently included in New Jersey Monthly magazine as one of the best 75 high schools in the state (number 2 in our DFG (district factor group)), recognized as a "silver" school in US News and World Report and were also featured in Redbook magazine as a successful school. We have been covered extensively by the Star Ledger for our achievements in extra and co-curricular activities as well as academic achievement. In fact, we were listed in this paper as one of 10 high schools in the state that college admissions directors look

favorably upon. Each year the paper prints a “School Report Card” for all the schools in the state listing standardized test scores, advanced placement, college bound, meeting NCLB, demographic data, etc., and we always rank among the top schools in the state. The District’s website, together with our own, lists many of our accomplishments. Since all Advisory Board meetings are televised on Cablevision, parents have the additional opportunity to learn about our student’s accomplishments. The District conducts a high school fair each year whereby parents and students are afforded the opportunity to view a video and PowerPoint presentation about the school and its offerings. In addition, the District mails newsletters to all Newark school students’ homes highlighting accomplishments. Our nationally ranked debate team travels around the country competing and sharing the good news about Science. Our boys basketball team won state championships twice in the last four years, and our academic teams compete locally, statewide and nationally. Because of the state of the art facility, its progress toward becoming green and because of the instructional program, requests from other schools are continually made to visit and share our academic program.

PART V - CURRICULUM AND INSTRUCTION

1. Curriculum:

The curriculum at Science Park High School is designed to prepare students for college and, specifically, to encourage them to choose careers where some form of science is essential for success in that field. All students are required to earn a minimum of 160 credits in order to earn a SPHS diploma. From grades 7 – 12, our students follow a nine period day schedule, including one period for lunch. The required courses for grades 7 and 8 are Language Arts, Algebra, Earth, Space, Life Science, Social Studies, a World Language, a Fine Art, Computer Applications and Gym/Health. The minimum requirements for grades 9 – 12 are 4 years of English, 4 years of math, four years of double period science, 3 years of social studies, 2 years of a world language, one year of a fine or performing art, one year of computer science and four years of gym and health. Each student in grade 9 is asked to choose one of 3 academies: Applied Science, Behavioral Science or Pure Science, which most represents his/her future profession. Within these academies there are Pathways and a multitude of electives: Journalism, Creative Writing, Forensic Debate, Women in Literature, Public Speaking, and SAT Verbal are offered through the English Department. Computer Science, Desktop Publishing, Web Page Design, and Probability and Statistics are the Mathematics Department offerings. Our Science Department lists Forensic Science, Robotics, Digital Imaging, Environmental Science, Anatomy and Physiology, Organic Chemistry and Geographic Information Systems. Among the History Department electives are Ethics, Law, African American Studies, Hispanic Studies, Women Studies, Sociology, and/or Economics. Students may select Spanish III & IV, French III & IV, and/or Portuguese III & IV are offered by the World Language Department. Fine and Performing Arts includes Art II, Studio Art, Drama, Concert Band and Advanced Chorus. Additionally within each Career Academy there are Pathways that require sequential courses for grades 10 – 12. Our GIS Program, one of the few in the state, includes GIS Remote Sensory, GIS I D&MCBGIS/RS I, D&MCBGIS/RS. Next year we are planning for a Pathway for the study of Epidemiology. We also have a Teacher Pathway for which students enroll in Public Speaking for Teachers, Intro to Teaching, Methods of Teaching and Educational Psychology. Honors courses are offered in English I-IV, Algebra I & II, Geometry, Pre-Calculus, World History, US History, Physics, Chemistry and Biology. Advanced Placement courses include English Literature, English Composition, Calculus, Statistics, and Computer Science, World History, US History, Government, Spanish and French; Seniors have the ability to take Chemistry and/or Biology at New Jersey Institute of Technology and Essex County College. Additionally, Essex County College offers our students a host of courses in science, math and humanities, which are offered beyond the school day.

The implementation of the curriculum through varied instructional techniques, high standards, inquiry-based and academic rigor is the methodology employed to ensure student success in post secondary pursuits.

2b. (Secondary Schools) English:

At Science Park, the English Department requires four years or twenty credits to complete its requirement. Science Park High School's English curriculum consists of four core courses for Grades 9-12, i.e., English I – IV), honors courses are offered at each grade level, Advanced Placement English Language and Composition (grade 11), AP English Literature Composition (grade 12), and six electives. Almost all students are on grade level as evidenced by students' scores on the HSPA; on PSAT, and SAT a majority of students are performing competitively. Nova Net, a technology program with SAT practice tests, is used in the SAT Verbal Preparation course to identify and assist students. The English Department has a rigorous contemporary curriculum, designed to focus on community and global issues and engender in students a felt need for learning. While community and global issues drive many themes, the English Department has achieved a delicate balance with long-established literary canon and contemporary literary works. The fundamentals of reading and writing are taught and reinforced in all courses and at all grade levels. Students study rhetorical

strategies and various literary genres, as well as criticism and theory. They also inquire into the nature of authorship of texts; examine and expand their ways of reading, interpreting, and writing about texts; trace the relation of literary criticism to theory; consider the relation of literary study to issues in real life; and develop independent habits of thought, research, discussion, and analytic writing that are informed by textual support, literary theory and criticism. All students are engaged in the process reading and writing through intensive reading and writing-workshop in class. Via differentiated forms of assessment, students weaknesses are immediately identified by her/his teachers, and individual lessons/learning activities are designed for individual or groups of students to hone their reading and writing skills. The English program emphasizes intellectual engagement and direct, practical involvement in self-directed learning, thus, it is expected that students develop habits of inquiry, thought, research, discussion, and analytic writing that are informed by literary theory and criticism.

3. Additional Curriculum Area:

The Science curriculum exemplifies the research-based approaches touted as highly effective for high poverty, urban communities. Instruction is structured to achieve objectives through strategies such as problem-based projects requiring research; interdisciplinary tasks; infusion of information technology; cooperative learning; independent study; and college-level course work. The constructivist classroom environment includes the use of multimedia presentations and open-ended, critical questioning as well as alternative assessment components for mid-term and final examinations, imaging software and digital imaging activities, computer simulations, micro scales and computer-based laboratories. Interactive software available on the school server creates opportunities for students to use highly sensitive programs in their studies.

Students learn to use the tools that scientists currently use and become sufficiently familiar with them to understand their use in scientific research and to make them a part of their research projects and presentations. The use of hyper-media presentations, web-based coursework, and electronic student and teacher bulletin boards enables the department to use electronic portfolios for online mentoring and for alternative assessment throughout the science curriculum.

Our mission is synonymous with that of the Siemens Foundation which, through their Intel competition, serves to “increase the available pool of highly skilled scientists and engineers in order to meet the manufacturing, service engineering, and R & D needs of the globally competitive economy.” We are partners with the CHEN institutions of higher education in the city of Newark and throughout New Jersey. Our students have opportunities to engage in scientific research both at the school and university sites. Our curriculum establishes coherence across disciplines using technology as the common thread for research, analysis, communication, presentation and artistic appreciation. The IT/AV design also supports this by facilitating the opportunity for students to dialogue with other school communities and experts in various fields through videoconferencing using the ITV studio.

4. Instructional Methods:

Methods of instruction at Science Park High School reflect current research on learning theory. Teachers at Science Park High School have ceased to be the holders of all information and have become facilitators exploring new worlds with their students, intrepidly venturing into vast uncharted intellectual horizons.

Instruction is grounded on a synthesis of models calling for reasoning, understanding and application of skills in solving various problems to facilitate students' understanding of real life issues. A range of instructional methods promote intellectual pluralism, bringing teachers with various perspectives together to collaborate and protract their pedagogical repertoires and interpersonal and professional strengths.

Teachers at Science Park High School differentiate learning—content, process, product, learning environment, and curriculum—by employing a variety of teaching methods to stimulate students' critical thinking and to hone their higher order thinking skills. Methods include explicit teaching, a method of

transmitting algorithmic information; conceptual teaching, a didactic and constructivist approach; exploratory teaching, a maieutic (Socratic) method of teaching concepts in which ideas are elicited by questioning; complex instruction, a method of teaching concepts, as well as facts, so that all students have access to this learning; and the community of inquiry, a synthesis of constructivist and complex models of instruction in which students construct understanding as they work, discuss, and discover together during the tasks that constitute the unit. Reinforcement of scaffolding is built into the instruction so that students develop deeper understanding of central concepts as they move from one task to another.

Many aspects of teaching methodology are successfully transferred across disciplines.

Rigorous methods of problem solving are demonstrated in all disciplines. Research-based reports of publishable quality, aesthetic inquiry, technology-based presentations, professional oral presentations, dramatizations and video production are just some of the methods undertaken by students to help them explore and develop their own learning content

5. Professional Development:

At Science Park High School, professional development opportunities are not limited to periodic pull-out days. At every level, teachers are encouraged to engage in focused, reflective professional learning. Through the sharing of best practices, review of literature, and participation in workshops both on- and off-campus, teachers have a wide variety of professional learning opportunities facilitated by a strong Professional Development Committee of faculty and administrators.

A school-wide commitment to Professional Learning Communities (PLCs) creates a venue in the hectic pace of the high school environment for twice-weekly collegial meetings that are dynamically designed to meet the needs of community members. By rotating the responsibilities of chairing the PLCs, teachers take an active role in designing the focus of professional learning. Recent PLC agendas have included departmental focus on vertical alignment, pedagogical approaches to writing and rhetoric instruction across the curriculum, and strategies for time management during high-stress periods of the academic year.

The PLCs also reinforce the wider strategies shared during professional development days. A recent Science Park High workshop called Curriculum Mapping for Curriculum Improvement was greatly enhanced by teachers' fluency with the new software, which had been introduced during PLC meetings. Teachers were better prepared and better focused to make use of the in-service time, and were able to ask the presenter targeted questions. In another example of the synergistic relationship between PLCs and professional learning, literature introduced as part of a workshop called Differentiating Assessment could be discussed in subsequent PLC meetings.

In addition to these in-house professional learning opportunities, teachers have a variety of chances throughout the year for high-quality offsite professional development opportunities, including those offered by the National Writing Project, the New Jersey Performing Arts Center, local universities including Montclair State University and Kean University, and regional professional organizations.

6. School Leadership:

The administrative team at Science Park High School consists of a principal, two vice-principals and six department chairs. One department chair oversees both the English and World Language departments, another supervises mathematics and technology, a third is responsible for science and media, a fourth for history, fine arts and physical education/health, a fifth chairs support services and the sixth is in charge of the athletic program. The department chairs primary role is the supervision of instruction. They review lesson plans, conduct regular observations and walk-throughs, meet with staff on a regular basis, develop the departments'

budgets and serve as members of the PLCs (Professional Learning Committees). The two vice principals each supervise three department chairs and the principal serves as the instructional leader for the entire school.

There are four types of collaboration that take place on a regular basis to ensure the improvement of instruction. Administrative, faculty and department meetings, which occur weekly and monthly respectively, are used to collect and review data, review current research, share successful instructional methods and develop strategies on how to best implement the curriculum. The second type of collaboration is through PLC's for which teachers in the same subject area meet twice weekly to share the latest research, their own classroom experiences and to develop plans for bettering student learning. Currently, each of the PLCs is working on curriculum mapping, the goal of which is to share with the other subject areas so that they can plan inter-disciplinary instructional activities through Problem-Based Learning. The third is through the PDC (Professional Development Committee) which is led by and made up of teacher leaders whose task is to conduct a needs assessment to determine the priority areas for staff development and in turn seek resources for the implementation of the staff development. Lastly, someone on staff possesses the expertise so that in-house professional development can take place. A very important aspect of improving student achievement is the analysis of data from standardized tests. Each core subject area department uses the results of the analysis to revise curriculum, vary instructional techniques and alter assessment tools.

PART VII - ASSESSMENT RESULTS

STATE CRITERION-REFERENCED TESTS

Subject: Mathematics

Grade: 11 Test: High School Proficiency Assessment (HSPA)

Edition/Publication Year: Differs every year Publisher: State of New Jersey

	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004
Testing Month	Mar	Mar	Mar	Mar	Mar
SCHOOL SCORES					
% Proficient plus % Advanced	98	95	99	96	92
% Advanced	38	42	45	46	28
Number of students tested	136	148	136	158	127
Percent of total students tested	100	99	99	100	99
Number of students alternatively assessed	0	0	0	0	0
Percent of students alternatively assessed	0	0	0	0	0
SUBGROUP SCORES					
1. Free and Reduced Lunch/Socio-Economic Disadvantaged Students					
% Proficient plus % Advanced	99	94	100	92	91
% Advanced	39	49	46	41	30
Number of students tested	65	66	48	51	79
2. Racial/Ethnic Group (specify subgroup): Black or African American					
% Proficient plus % Advanced	97	90	98	95	86
% Advanced	30	37	37	34	21
Number of students tested	57	60	57	62	42
3. (specify subgroup): Hispanic					
% Proficient plus % Advanced	98	100	100	96	98
% Advanced	42	43	40	46	25
Number of students tested	43	51	47	52	45
4. (specify subgroup): White					
% Proficient plus % Advanced	100	97	100	97	92
% Proficient plus % Advanced	48	50	67	63	35
Number of students tested	29	32	30	38	37

Notes:

Subject: Reading

Grade: 11 Test: High School Proficiency Assessment (HSPA)

Edition/Publication Year: Differs every year Publisher: State of New Jersey

	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004
Testing Month	Mar	Mar	Mar	Mar	Mar
SCHOOL SCORES					
% Proficient plus % Advanced	99	100	99	99	98
% Advanced	21	34	37	22	24
Number of students tested	136	148	137	158	128
Percent of total students tested	100	99	100	100	100
Number of students alternatively assessed	0	0	0	0	0
Percent of students alternatively assessed	0	0	0	0	0
SUBGROUP SCORES					
1. Free and Reduced Lunch/Socio-Economic Disadvantaged Students					
% Proficient plus % Advanced	99	100	96	96	98
% Advanced	20	36	31	24	28
Number of students tested	65	66	49	51	80
2. Racial/Ethnic Group (specify subgroup): Black or African American					
% Proficient plus % Advanced	100	100	100	98	95
% Advanced	18	30	32	21	28
Number of students tested	57	60	57	62	43
3. (specify subgroup): Hispanic					
% Proficient plus % Advanced	98	100	98	98	100
% Advanced	19	35	45	19	20
Number of students tested	43	51	47	52	45
4. (specify subgroup): White					
% Proficient plus % Advanced	100	100	97	100	100
% Proficient plus % Advanced	31	34	36	24	22
Number of students tested	29	32	31	38	37

Notes:

National Norm-Referenced Assessments

Subject Mathematics Grade 12 Test SAT

Edition/Publication Year Differs every year Publisher College Board

	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004
Testing Month	Varies	Varies	Varies	Varies	Varies
School Scores					
Average Score	514	524	523	505	513
Number of students tested	138	131	149	120	126
Percent of total students tested	100 %	98 %	96 %	101 %	98%
Number of students alternatively assessed	0	0	0	0	0
Percent of students alternatively assessed	0	0	0	0	0
Subgroup Scores					
1. Black or African-American					
Average Score	507	508	508	487	501
Number of students tested	48	52	58	34	36
2. Hispanic					
Average Score	517	523	527	516	501
Number of students tested	47	42	47	42	37
3. White					
Average Score	527	545	538	496	541
Number of students tested	21	19	25	19	23

	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004
National Mean Score	515	515	518	520	518
National Standard Deviation	112	114	115	115	114

Subject Critical Reading Grade 12 Test SAT

Edition/Publication Year Differs every year Publisher College Board

	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004
Testing Month	Varies	Varies	Varies	Varies	Varies
School Scores					
Average Score	469	490	476	484	483
Number of students tested	138	131	149	120	126
Percent of total students tested	100 %	98 %	96 %	101 %	98%
Number of students alternatively assessed	0	0	0	0	0
Percent of students alternatively assessed	0	0	0	0	0
Subgroup Scores					
1. Black or African-American					
Average Score	476	483	468	489	484
Number of students tested	48	52	58	34	36
2. Hispanic					
Average Score	468	487	475	489	476
Number of students tested	47	42	47	42	37
3. White					
Average Score	461	505	464	437	492
Number of students tested	21	19	25	19	23

	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004
National Mean Score	502	502	503	508	508
National Standard Deviation	116	113	113	113	112

Subject Mathematics Grade 11 Test PSAT

Edition/Publication Year Differs every year Publisher College Board

	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004
Testing Month	October	October	October	October	October
School Scores					
Average Score	50.8	49.8	51.6	49.2	47.3
Number of students tested	136	148	137	157	125
Percent of total students tested					
Subgroup Scores					
1. Black or African-American					
Average Score	48.9	47.6	50.2	47.7	45.3
Number of students tested	57	56	55	61	37
2. Hispanic					
Average Score	52.6	51.4	52.4	49.7	48.8
Number of students tested	42	54	47	56	52
3. White					
Average Score	52.1	50.6	53.9	50.1	47.8
Number of students tested	30	25	20	28	24

	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004
National Mean Score	48.2	48.5	49.2	48.8	48.1
National Standard Deviation	11.7	11.4	11.3	11.2	11.4

Subject Critical Reading Grade 11 Test PSAT

Edition/Publication Year Differs every year Publisher College Board

	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004
Testing Month	October	October	October	October	October
School Scores					
Average Score	47.4	46.7	45.9	45.1	43.8
Number of students tested	136	148	137	157	125
Percent of total students tested					
Subgroup Scores					
1. Black or African-American					
Average Score	46.0	46.4	45.9	44.1	43.9
Number of students tested	57	56	55	61	37
2. Hispanic					
Average Score	47.8	47.4	45.7	45.3	43.9
Number of students tested	42	54	47	56	52
3. White					
Average Score	49.1	46.5	45.9	45.1	43.8
Number of students tested	30	25	20	28	24

	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004
National Mean Score	46.7	47.7	47.5	46.9	47.2
National Standard Deviation	11.2	11.3	10.9	10.9	10.8

Subject Mathematics Grade 10 Test PSAT

Edition/Publication Year Differs every year Publisher College Board

	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004
Testing Month	October	October	October	October	October
School Scores					
Average Score	45.2	46.8	47.6	47.1	45.3
Number of students tested	226	155	154	143	156
Subgroup Scores					
1. Black or African-American					
Average Score	43.7	45.1	45.8	47.3	44.0
Number of students tested	85	56	57	61	54
2. Hispanic					
Average Score	46.4	47.7	48.3	46.3	45.8
Number of students tested	76	51	56	43	55
3. White					
Average Score	46.5	48.1	49.1	47.9	47.1
Number of students tested	47	24	27	28	29

	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004
National Mean Score	43.1	43.5	44.0	44.2	43.9
National Standard Deviation	11.3	11.3	11.2	11.1	11.2

Subject Critical Reading Grade 10 Test PSAT

Edition/Publication Year Differs every year Publisher College Board

	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004
Testing Month	October	October	October	October	October
School Scores					
Average Score	42.5	44.1	42.5	43.6	40.4
Number of students tested	226	155	154	143	156
Subgroup Scores					
1. Black or African-American					
Average Score	41.9	42.6	41.5	43.4	39.9
Number of students tested	85	56	57	61	54
2. Hispanic					
Average Score	43.1	44.9	43.1	43.6	40.2
Number of students tested	76	51	56	43	55
3. White					
Average Score	43.0	45.7	43.6	42.7	40.6
Number of students tested	47	24	27	28	29

	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004
National Mean Score	41.8	42.6	42.5	42.5	43.0
National Standard Deviation	11.1	11.1	10.8	11.0	10.7

National Criterion-Referenced Assessments

Subject Mathematics & English Language Arts Grade 11&12 Test Advanced Placement Exams

Edition/Publication Year Differs every year Publisher College Board

	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004
Testing Month	May	May	May	May	May
School Scores					
Total Number of AP Courses Offered	9	11	8	7	5
Total Number of Tests Administered	117	116	72	85	57
Total Scores of 3 or Greater	70	44	45	44	28
Number of English AP Courses Offered	2	2	2	2	1
Number of Tests Administered (English)	48	40	21	26	14
Total Scores of 3 or Greater (English)	19	10	7	12	6
Number of Math AP Courses Offered	3	2	2	2	2
Number of Tests Administered (Math)	36	24	24	24	22
Total Scores of 3 or Greater (Math)	29	13	16	10	7
Subgroup Scores					
1. Black or African-American					
Total number of students participating in AP	30	31	18	17	9
Number with a score greater or equal to 3	14	7	6	7	4
2. Hispanic					
Total number of students participating in AP	30	28	17	33	16
Number with a score greater or equal to 3	23	18	14	18	12
3. White					
Total number of students participating in AP	20	9	11	7	11
Number with a score greater or equal to 3	14	3	8	3	5