

STUYVESANT HIGH SCHOOL  
STANLEY TEITEL/PRINCIPAL  
Department of Biology & Geo-Science  
Elizabeth Fong/Assistant Principal

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A VARIETY OF SCIENCE OPPORTUNITES

- It is the mission of the Science Departments at Stuyvesant High School to provide a wide-range of educational science opportunities to the Stuyvesant student body.
  - The science opportunities listed below are just a small sampling of programs afforded to the Stuyvesant student.
1. **American Museum of Natural History (AMNH)** – 81<sup>st</sup> Street and Central Park West, NYC
    - AMNH, Education Department Website  
<http://www.amnh.org/education>
    - **The Young Naturalist Awards**, a research –based contest for grades 7 to 12. Recognizes the accomplishments of students who have performed field work in biology, Earth science, and astronomy.
      - [www.amnh.org/youngnaturalistawards](http://www.amnh.org/youngnaturalistawards)
  2. **Columbia University Science Honors Program (SHP)**  
SHP is a highly selective program for 9<sup>th</sup> to 11<sup>th</sup> grade students who have exceptional talent in the sciences and mathematics. Student selection occurs in the spring semester. Program runs on Saturdays throughout the year.
    - *Science Honors Program; Columbia University; 5256 Pupin Physics Labs; 550 West 120<sup>th</sup> Street; New York, NY 10027; (212) 854-3354.*
  3. **The DuPont Challenge 2008 Science Essay Competition**  
One of the foremost student science and technology prize programs in the USA and Canada. Its goal is to help increase scientific literacy among students and to motivate students to excel in communicating scientific ideas.  
First Place, a student wins \$3000 and an expenses-paid trip to The Walt Disney World Resort and Kennedy Space Center, along with a parent.
    - [the challenge.dupont.com](http://thechallenge.dupont.com)
  4. **International Sustainable World Project Olympiad** –(Energy, Engineering, & Environment – I-SWEEEP)  
This is an international competition. The objective of this competition is to increase the awareness of sustainability issues the world is facing and how the next generation will solve them.
    - website [www.isweeep.org](http://www.isweeep.org)
    - for further information [info@isweeep.org](mailto:info@isweeep.org)
  5. **Health Professions Project at Long Island University, Brooklyn Campus**  
A seminar series which introduces interested high school juniors and seniors to various health professions

- *Susanna Yurick, Director – Bridge Programs; Long Island University, Brooklyn Campus; 1 University Plaza; Brooklyn, New York 11201-5372*  
(718) 488-1049

6. **High School Fellows Program of the New York University School of Medicine**  
A program for 10<sup>th</sup> and 11<sup>th</sup> graders designed to foster their interest in the pursuit of college education in the sciences or in medicine. Upon completion of the first semester of this program, outstanding students will be considered for acceptance into an intensive six-week summer program as a clinical or basic Research Fellow.  
- *High School Fellows Program, NYU School of Medicine; 650 First Avenue, Rm. 579 New York, NY 10016, (212) 263-7746*
7. **Roswell Park Cancer Institute – 56<sup>th</sup> Annual Summer Research Participation Program**  
A program designed for 11<sup>th</sup> graders interested in scientific research as a possible career.
  - *Arthur M. Michalek, Ph.D – Dean, Roswell Park Graduate Division, University of Buffalo; Elm & Carlton Sts.; Buffalo, New York 14263*
  - [www.roswellpark.org](http://www.roswellpark.org) e-mail [askrpci@roswellpark.org](mailto:askrpci@roswellpark.org)
8. **TechXplore – National Science & Technology Education Partnership**  
Students and teachers work as a team with a technology industry mentor and solve real-world problems. NSTEP provides the TechXplore competition, facilitator training and support at no cost. Students develop their own website or PowerPoint presentation to display their solutions.  
- NSTEP [www.nstep-online.org](http://www.nstep-online.org) - TechXplore [www.techxplore.org](http://www.techxplore.org)

#### **Siemens/Westinghouse, Intel Science Talent Search, and NYCSEF/ISEF**

Independent research during the summers and/or during the year can be summarized into a scientific article which is sent to several large national competitions along with more specialized competitions for individual subject areas. Each of the competitions is using distinct criteria for evaluations allowing many different types of projects to win in one criteria for evaluations allowing many different types of projects to win in one place or another. For information on these three major contests the following websites are useful:

<http://www.siemens-foundation.org/en/>

<http://www.sciserv.org/sts/>

<http://www.intel.com/pressroom/kits/education/isef.htm>.

The psychology research competition has been merged with ISEF this year.

NYU psychology department has a formal high school research program.

<http://www.psych.nyu.edu/research/highschool.html>

Rockefeller University has a formal high school research program in biology.

<http://www.rockefeller.edu/outreach/>

Young Epidemiology Scholars for students participating in Public Health Type Research

<http://www.collegeboard.com/yes/>

#### **Hospital Affiliations:**

1. Beth Israel Medical Center

317 East 17<sup>th</sup> Street, New York, NY 10003

(212) 420-3917

2. **Mount Sinai Medical Center**  
100<sup>th</sup> Street & 5<sup>th</sup> Avenue, New York, NY (212) 348-1306
3. **New York Downtown Hospital**  
170 William Street, New York, NY 10038 (212) 312-5214
4. **New York-Presbyterian**  
525 East 68<sup>th</sup> Street, New York, NY 10021 (212) 746-4396
5. **University Hospital**  
475 Seaview Avenue, Staten Island, NY 10305 (718) 226-9307

**Veterinarian Hospitals:**

1. **Animal General; 148 9<sup>th</sup> Ave.; NY, NY 10011 (212) 501-9600**
2. **Downtown Vet. Clinic; 588 Columbus Ave.; NY, NY 10024 (212) 463-8705**

### SUMMER PROGRAMS IN THE PHYSICAL SCIENCES

Eligibility (Grade you must be in Spring '08)	NAME OF PROGRAM	TOPICS	DATES	UNIVERSITY	CITY	COST	DEADLINE	MORE INFO	GOOD FOR INTEL?
At least 16 years old	Science Outreach Program	Biochemistry, Chemistry, Medicine, Physics, Mathematical Biology	July-Aug.	Rockefeller University	Manhattan	None	rolling	<a href="http://www.rockefeller.edu/outreach">http://www.rockefeller.edu/outreach</a>	Y

You conduct a research project under the mentorship of a professor at Rockefeller University. Centered around 75 cutting-edge laboratories you may work in a broad range of fields — such as cell and developmental biology, genetics, immunology and infectious diseases, neuroscience, structural biology, biophysics, biochemistry, physics, mathematics and statistics.

Eligibility (Grade you must be in Spring '08)	NAME OF PROGRAM	TOPICS	DATES	UNIVERSITY	CITY	COST	DEADLINE	MORE INFO	GOOD FOR INTEL?
Sophomores and Juniors minorities and female students of any ethnicity	Critical and Analytical Reasoning Enrichment	Engineering	June- Aug.	University of Pittsburgh	Pittsburgh, PA	None	4/1	<a href="http://www.engr.pitt.edu/diversity/pecap/care.html">http://www.engr.pitt.edu/diversity/pecap/care.html</a>	N

The summer experience includes interactive classroom instruction in math and science, SAT preparation, and hands-on engineering projects. Students will explore applications of math and science to engineering, basic principles of engineering, engineering design, and problem solving. Teamwork and effective communication skills will also be emphasized. In addition, students will participate in group sessions and testing to help them clarify their interests and increase their awareness of engineering majors and careers

Eligibility (Grade you must be in Spring '08)	NAME OF PROGRAM	TOPICS	DATES	UNIVERSITY	CITY	COST	DEADLINE	MORE INFO	GOOD FOR INTEL?
Sophomores and Juniors taking Calculus	The Summer Science Program	Astronomy	June 26- Aug 6	Happy Valley School	Ojai, California	\$3,200	3/25	<a href="http://www.summerscience.org">http://www.summerscience.org</a>	Y

The curriculum is organized around a classic research project in astronomy: observation of an asteroid and calculation of its orbital elements. By day, students learn astronomy, calculus, physics, and computer programming. By night, working in teams of three, they make a series of telescopic observations, measure them precisely, and write the software necessary to reduce the data.

Eligibility (Grade you must be in Spring '08)	NAME OF PROGRAM	TOPICS	DATES	UNIVERSITY	CITY	COST	DEADLINE	MORE INFO	GOOD FOR INTEL?
Freshmen and Sophomores	High School Science Research Program	Anthropology, Astrophysics, Biodiversity, and Genetics	2 summers and you work 2x's per week for 2 years during the school year	American Museum of Natural History	Manhattan	None	3/18	<a href="http://www.amnh.org/education/child_youth_fam/hresearch.html">http://www.amnh.org/education/child_youth_fam/hresearch.html</a>	Y

Students begin the program with a three week Summer Science Institute and select a "major" in order to learn about the methods and content of one discipline in depth. Current majors include Anthropology, Astrophysics, Biodiversity, and Genetics, all areas in which the Museum specializes. During the first year, young people learn the fundamental concepts and skills of the chosen discipline, talk with scientists at the Museum and at other scientific institutions, and take trips to conduct fieldwork, visit

colleges, and see firsthand the range of applications and careers available to someone who pursues work in that field. By the second summer, students conduct research projects and present findings to peers and professionals.

The Research Internship Program provides a great opportunity for high school students to tackle research projects in civil, chemical, electrical, mechanical, biomedical and environmental engineering; mathematics, chemistry, physics and astronomy. Each research project is complemented by lectures and discussions led by Cooper Union faculty. In addition to this technical training, the program includes workshops on oral presentations, technical writing, career choices, college admissions as well as introductions to Cooper Union's library resources and computer facilities. Typically projects include a field trip to a research site or major science center to enhance the interns' experience.

Students work four days per week (Monday through Thursday) at their research sites under the supervision of professional scientists. Fridays are spent in weekly enrichment sessions at the New York Academy of Sciences that include lectures, workshops, career discussions, and staff-facilitated small group meetings

Eligibility (Grade you must be in Spring '08)	NAME OF PROGRAM	TOPICS	DATES	UNIVERSITY	CITY	COST	DEADLINE	MORE INFO	GOOD FOR INTEL?
Juniors and Seniors - minorities and females	NASA Summer High School Apprenticeship Research Program	Space related	8 weeks in summer	Various sites around the US	Various	None	2/14	<a href="http://www.nasasharp.com">http://www.nasasharp.com</a>	Y

"NASA is committed to inspiring the next generation of explorers," said NASASHARP Program Manager Deborah Glasco. "NASA SHARP is a direct extension of this commitment dedicated to academically and professionally motivating a diverse group of youth that may one day play a vital role in fulfilling the Vision for Space Exploration," she said.

Eligibility (Grade you must be in Spring '08)	NAME OF PROGRAM	TOPICS	DATES	UNIVERSITY	CITY	COST	DEADLINE	MORE INFO	GOOD FOR INTEL?
Juniors and Seniors	Minority Introduction to Engineering, Entrepreneurship, and Engineering	Physics, Math, Robotics, Programming, Entrepreneurship, Chemistry, Biochemistry	June-Aug. 6 weeks	MIT	Cambridge	None	2/1	<a href="http://web.mit.edu/mites/www/">http://web.mit.edu/mites/www/</a>	N

MITE2S (Minority Introduction to Engineering, Entrepreneurship, and Science) is a rigorous six-week residential, academic enrichment summer program for promising high school juniors who are interested in studying and exploring careers in science, engineering, and entrepreneurship. MITE2S participants spend a rigorous 30-35 hours in classes and lab each week and receive daily assignments.

Eligibility (Grade you must be in Spring '08)	NAME OF PROGRAM	TOPICS	DATES	UNIVERSITY	CITY	COST	DEADLINE	MORE INFO	GOOD FOR INTEL?
Female Juniors	Women's Technology Program	Computer Science, Electrical Engineering, and Math)	July 25- July 23	MIT	Manhattan	\$2,000	2/1	<a href="http://wtp.mit.edu/">http://wtp.mit.edu/</a>	N

The four-week program includes rigorous classes in computer science, electrical engineering, and mathematics taught by women PhD candidates in the MIT EECS Department, and allows girls to explore through hands-on experiments and team-based projects.

Eligibility (Grade you must be in Spring '08)	NAME OF PROGRAM	TOPICS	DATES	UNIVERSITY	CITY	COST	DEADLINE	MORE INFO	GOOD FOR INTEL?
Juniors and Seniors	Simmons Summer Research Fellowship	All sciences	June-Aug. 7 weeks	Stony Brook University	Stony Brook, LI	\$1,000 if you live on campus	1/15	<a href="http://www.stonybrook.edu/simons">http://www.stonybrook.edu/simons</a>	Y

The Simons Summer Research Program gives academically talented high school students who are between their junior & senior years the opportunity to engage in hands-on research in science, math or engineering at the University at Stony Brook. Simons Fellows work with distinguished faculty mentors, learn laboratory techniques and tools, become part of active research teams, and experience life at a research university.

Programs in the Fall and Spring									
Eligibility (Grade you must be in Spring '08)	NAME OF PROGRAM	TOPICS	DATES	UNIVERSITY	CITY	COST	DEADLINE	MORE INFO	GOOD FOR INTEL?
Fresh, Sophomores, Juniors	SHP (Science Honors Program)	All sciences	Saturdays 10-12:30 in the Fall	Columbia University	Manhattan	None	3/18	<a href="http://www.columbia.edu/cu/shp/">http://www.columbia.edu/cu/shp/</a>	N

The Columbia University Science Honors Program (SHP) is a highly selective program for high school students who have exceptional talent in mathematics and the sciences. The SHP holds classes at Columbia from 10:00 A.M. to 12:30 P.M. on Saturdays throughout the academic year. Courses are primarily in the physical, chemical, biological, behavioral, and computing sciences; and instructors are scientists and mathematicians who are actively engaged in research at the University