SUMMER SCIENCE OPPORTUNITIES

(*Programs with asterisks are offered to Middle School students.)

National Youth Leadership Forum on Medicine
NYLF/MED is a 10-day program exploring medicine through lectures and discussions with distinguished medical leaders, research, and seminars. Students take part in an extensive examination of state-of-the-art diagnostic tools and future medical specialties. Ask your teacher for a nomination!

Web:  http://www.nylf.org/med/index.cfm

Drexel University College of Medicine: Mini-Med Summer Camp
If you always wondered about being a doctor, the 5-week Drexel University College of Medicine Mini-Med Summer Camp™ may be your adventure waiting to happen. If you have a solid academic record and are about to enter your junior or senior year in high school, this one-of-a-kind experience can open the door to enlighten you about a future career in medicine. Mini-Med Summer Camp™ physicians are Drexel University College of Medicine faculty members, fellows, and residents in each specialty represented. All daily activities will take place at Hahnemann University Hospital and in the physicians’ own medical offices. Observe OR, ER, Pulmonary and Critical Care, Internal Med, Pathology, Neurology. Includes morning lecture, clinical rounds, noon conference, clinic hours, and flex time.

Web:  http://www.drexelmed.edu/Home/OtherPrograms/MiniMedSchool/SummerCamp.aspx

Drexel University College of Medicine: High School Summer Research Internship
Drexel University College of Medicine provides paid Summer Research Internships (HSSRI) to students from area high schools with an interest in biomedical research. The HSSRI program provides students with an opportunity to enhance their understanding of current biological/biomedical principles and their analytical/technical skills in a research environment. Research interns are mentored by Drexel Med faculty, who work in various disciplines, including biochemistry, molecular and cell biology, neuroscience, microbiology, immunology, pathobiology, pharmacology and physiology.

The 2012 internship is scheduled for June 18–August 10. Students are expected to participate a minimum of 25 hours per week to a maximum of 40 hours per week. Although the schedule is flexible, students are required to complete the eight-week program and to participate in all program activities. Students will receive a $1,500 stipend for the full eight weeks.

Web:  http://www.drexelmed.edu/Home/AcademicPrograms/BiomedicalGraduateStudies/SummerResearchOpportunities/HighSchoolSummerResearchInternshipProgram.aspx

Summer Science ® Jefferson: Biomedical Sciences for High School Students
Through discussions with leading biomedical researchers and hands-on laboratory experimentation, Summer Science ® Jefferson aims to foster an appreciation of the role of science in everyday life, to promote an informed understanding of scientific issues that make daily headlines, and to familiarize young people of all backgrounds with the vital and expanding field of biomedical research. Areas of study include cell biology, molecular biology, cellular pathology, and the biology of disease. Students learn laboratory techniques such as cell culture, DNA sequencing, and PCR (polymerase chain reaction, a technique used to amplify DNA). They discover how these techniques are applied to such diverse purposes as criminal investigations, paternity testing, disease diagnosis, and the development of new pharmaceutical products. SummerScience ® Jefferson instructors serve on the faculty of Jefferson Medical College (Institute for Human Virology and Biodefense; Department of Pathology, Anatomy and Cell Biology) and Jefferson College of Health Professions (Department of Bioscience Technologies, Radiologic Sciences, and Physical Therapy).

Web:  http://www.jefferson.edu/summerscience
Smith College: Summer Science and Engineering Program for High School Girls
SSEP is a four-week residential program for girls in grades 9-12 with strong interests in science, engineering, and medicine. Learn about the biology of women athletes, design with engineers, or unlock the mystery of your own DNA.

Web:  http://www.smith.edu/summerprograms/ssep

Alfred University: Consumer Chemistry Camp
Have you ever wondered ... Why and how your hair dye works? What makes diet soda sweet? What the “pro-vitamins” in your shampoo are? What electrolytes in sports drinks are good for? Why everyone is so worried about trans fats? How a detergent gets your clothes clean? This camp will help answer those questions and many more! You will discover how to interpret the ingredients lists of your favorite foods and products while learning some basic chemistry. For students aged 14-17, who have completed 8th grade math and science.

Web:  http://www.alfred.edu/summer/camps/chemistry.cfm

Alfred University: Engineering the Elements – Polymers and Electronic Ceramics
This exciting residential program is an opportunity to learn more about engineering, to sample life on a college campus, and to meet other students with similar interests and academic ability. Students will participate in hands-on lab experiences focusing on polymers and electronic ceramics. For high school students who have completed their sophomore or junior years.

Web:  http://www.alfred.edu/summer/hs.cfm

Alfred University: Robotics Engineering Camp
This program is based on the VEX Robotics System which offers high school students an exciting platform for learning about areas rich with career opportunities spanning science, technology, engineering and math (STEM). Beyond science and engineering principles, a VEX Robotics project also encourages teamwork, leadership and problem solving among groups.

Web:  http://www.alfred.edu/summer/camps/robotics.cfm

Worcester Polytechnic Institute: Frontiers & Launch
Looking for something new and exciting to do over summer break? Would you love to spend your summer splicing DNA or designing a robot? Or would your prefer creating your own multimedia Web pages, investigating interplanetary travel, or exploring flight? Well, WPI just may have the perfect solution for you. Frontiers is a summer residential program for soon-to-be juniors and seniors interested in science, mathematics, engineering, and robotics. Launch is a weeklong academic program for rising freshman and sophomores in high school interested in furthering their knowledge in biology, chemistry/biochemistry, interactive media & game development, and robotics.

Web:  http://www.wpi.edu/admissions/undergraduate/visit/about-programs.html

Drexel University College of Engineering: Summer Music Technology Program
The College of Engineering Summer Music Technology (SMT) Program is an innovative, one-week learning experience that provides twenty high school sophomores and juniors with a unique opportunity to learn about music production technology and digital audio from Drexel faculty and students. This program approaches music and audio technology from the perspective of engineering, mathematics and science. Some questions that will be explored during the one-week program include: What technologies do artists use to record and produce their albums? What is mp3, and how does your computer convert sound into an mp3 file? How do music players (like the iPod) work, and how hard is it to build one? What is digital sound, and how do math and physics help us understand sound? How can we use computers to synthesize and manipulate sound and sound effects? There is no cost for this program. It is designed for commuter students.

Web:  http://drexel.edu/coe/special/summer/SMT/program.asp
Drexel University College of Engineering: Summer Mentorship Program
The College of Engineering Summer Mentorship Program is a dynamic, three-week research experience that provides high school students with a unique opportunity to work in a Drexel laboratory on an individualized research project. In addition to the educational experience that research provides, students will also gain a competitive edge in the college application office and foster relationships with their faculty mentors as well as like-minded high school students. This is a residential program.

Web: http://www.drexel.edu/coe/special/summer/mentor/program.asp

Penn Engineering: Summer Academy in Applied Sciences and Technology
SAAST gives students the chance to take their interest in science and math to the next level and apply it to cutting-edge technology in Biotechnology, Computer Graphics, Computer Science, Nanotechnology, or Robotics. The five rigorous, intensive SAAST courses give high school students an advance look at the learning experience they can expect in college. Combining sophisticated theory with hands-on work in our world-class laboratories and culminating in independent projects, SAAST challenges students to work harder, smarter, and more creatively than they ever have before. Every SAAST course carries college credit from Penn, and includes exciting site visits to industry and government, enabling students to see technology at work in the real world.

Web: http://www.seas.upenn.edu/saast/index.html

*Penn Engineering: Penn GEMS: Girls in Engineering, Math and Science Camp
Calling all middle school girls in 6th, 7th, or 8th grade who will be 7th, 8th, or 9th graders in 2012-2013. Join us for a great week of hands-on science, math, and engineering at Penn! You’ll learn about what’s going on in Bioengineering, Nanotechnology, Materials Science, Graphics and Computing.

- Discover how engineers change lives
- Make new friends and learn from Penn students
- Experience engineering through challenging, hands-on activities with your fellow campers.

Web: http://www.seas.upenn.edu/awe/gems/index.php

Penn Summer Academies: Biomedical Research Academy
The four-week, non-credit Biomedical Research Academy is an opportunity to exam topics in biological sciences beyond the high school level. Taught by members of Penn’s Department of Biology and other regional biology teachers, the goal of this program is to introduce you to the experimental basis of biology, including relevance to disease. The focus of the program will be on how we know what we know. Daily morning lectures and discussions on the cellular, molecular, and genetic aspects of biology will be followed on some days by guest lectures from scientists and clinicians from Penn’s Department of Biology and from the Penn Medical School. Afternoons will be spent in the laboratory with hands-on experiments that introduce you to the tools and techniques used in biomedical research labs. You will also participate in a small group “journal club” where you will learn to read primary scientific literature on a current topic of interest.

Web: http://www.sas.upenn.edu/summer/programs/highschool/academies#01

Penn Summer Academies: Experimental Physics Research Academy
Have you ever taken a ride on a rollercoaster and wondered how many Gs your body experienced at the bottom of the big drop? If so, the four-week, non-credit Physics Academy is for you. Taught by members of Penn’s Department of Physics and Astronomy and other regional physics teachers, this program combines in-depth lectures and discussions on mechanics, electromagnetism, quantum dynamics, and astrophysics with hands-on experiments to measure the speed of light and a field trip to an amusement park to study the physics of rides using electronic data-logging devices. Other activities include an afternoon at Penn’s indoor rock-climbing wall to learn firsthand about how best to use friction to counteract the force of gravity as well as a tour of the Franklin Institute planetarium and observatory.

Web: http://www.sas.upenn.edu/summer/programs/highschool/academies#02
Fox Chase Cancer Center: High School Student Scientist Program
The Partnership for Cancer Research Education is designed to help high school students understand science by participating in cancer research. The Student Scientist Program places high school students in Fox Chase Cancer Center labs to work on current research projects. Students work after school and full time in the summer as they learn science information, practice inquiry skills, and try out the life of a scientist.

Web:  http://www.fccc.edu/helpingFoxChase/volunteering/student-scientist/

Widener University: Engineering Summer Camp
Widener’s Engineering Summer Camp was developed by engineering faculty at Widener to introduce high school students to the field of engineering in a nurturing, non-competitive, “hands-on” environment. Students experience a four-day schedule full of computer workshops, demonstrations, films, laboratory exercises, discussion groups, and presentations, all while having fun. High school students make concrete blocks, launch soda bottle rockets, and explore the fields of chemical, civil, electrical, and mechanical engineering. Sessions are open to students entering grades 10, 11, and 12 in the fall. All sessions are held on Widener’s Main Campus in Chester, Pennsylvania. A resident program (room, board, and planned activities) is available.

Web:  http://www.widener.edu/academics/collegesandschools/engineering/outreachprograms/summicamp

Penn State University: MTM (“Make the Machine”) Engineering Camp for Girls
MTM Engineering Camp for Girls is a day camp for girls entering grades 9-12. It offers five different interdisciplinary engineering modules and hands-on opportunities. Your MTM experiences will allow you to explore the wide variety of engineering career possibilities available and experience what your life might be like on a college campus. High school girls entering grades 9-12 in fall are eligible. Applicants should be enrolled in high school math classes, and have an interest in math and science and a desire to learn more about engineering as a career choice. Engineering is an exciting, diverse field highlighted by one overarching goal: Engineers solve problems to make the world a better place. As an MTM participant, you can actively explore this creative, rewarding profession. Engineering makes life better!

Web:  http://www.engr.psu.edu/wep/MTM.html

Temple University College of Engineering: Women’s Engineering Exploration (WE2)
Temple University’s College of Engineering is offering an exciting, one-week residential summer program for female high school students entering their sophomore, junior, or senior year. The goal of this pre-college outreach program is to increase awareness and interest in technological advancement in the field of engineering among high school students. The program aims to accomplish the above-mentioned goal by providing an opportunity to explore the world of engineering by interacting with faculty and students at the college while working in their research labs. Students will have opportunities to hear lectures from engineers, work on numerous engineering projects, engage in group discussions, and go on industry field trips.

Web:  http://www.temple.edu/engineering/WE2/index.html

The Research Science Institute (RSI)
Each summer, 80 of the world’s most accomplished high school students gather at the Massachusetts Institute of Technology for the Research Science Institute (RSI). Invited students enjoy a six-week, cost-free program designed to kick-start their careers of leadership in science, mathematics, engineering, and technology. Participants experience the entire research cycle from start to finish. They read the most current literature in their field, draft and execute a detailed research plan, and deliver conference-style oral and written reports on their findings. RSI projects are open-ended and relevant, fitting into the larger work of the host laboratory. The experience gives many their first taste of work at the creative edge of science.

Web:  http://www.cee.org/programs/rsi
MIT: Women’s Technology Program (WTP)
The MIT Women’s Technology Program (WTP) is a four-week summer academic and residential experience where female high school students explore engineering through hands-on classes, labs, and team-based projects in the summer after 11th grade. Students attend WTP in either Electrical Engineering and Computer Science (EECS) or Mechanical Engineering. Our goal: to spark high school girls’ interest in the future study of engineering and computer science.

Web:  http://wtp.mit.edu/

MIT: MITES (Minority Introduction to Technology and Science)
MITES (Minority Introduction to Engineering 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. This national program stresses the value and reward of pursuing advanced technical degrees and careers while developing the skills necessary to achieve success in science and engineering in an increasingly racially and ethnically diverse nation and world. MITES is rooted in MIT’s belief in the importance to our nation that minorities and other underrepresented segments of the population pursue higher education and careers in these fields.

Web:  http://web.mit.edu/mites/www/

*Distance Learning Center: Physician Scientist Training Program
Physician Scientist Training Program (PSTP), which is driven by a longitudinal training model that supports a national pool of minority child prodigies across a ten year regimen (7th grade through the college senior year), and a multi-institutional approach that rotates these whiz kids through basic science labs in academia, the NIH and the pharmaceutical industry. The PSTP targets racial groups which have been historically underrepresented in the medical profession for their population size, and who suffer from the health disparities gap. The Physician Scientist Training Program (PSTP) was designed to produce candidates for M.D. programs and M.D./Ph.D. dual degree programs. This comprehensive training initiative spans the junior high, senior high and college summers, and utilizes an integrated developmental regimen that prepares the students to successfully pursue a research career in medicine.

Web:  http://www.thedistancelearningcenter.org/training_programs/physician_scientist_training_program_PSTP.php

*Distance Learning Center: Basic Scientist Training Program
The Basic Scientist Training Program (BSTP) provides an earlier start in the training pipeline to a national pool of minority child prodigies who desire a career in science. It was designed to produce candidates for Ph.D. programs in the biomedical sciences. This comprehensive training initiative spans the junior high, senior high and college summers, and utilizes an integrated developmental regimen that prepares the students to successfully pursue a research career in the biomedical discovery arena.

Web:  http://www.thedistancelearningcenter.org/training_programs/basic_scientist_training_program_BSTP.php

*Distance Learning Center: Technology, Engineering & Math Program (TEMP)
The overarching mission of Distance Learning Center’s Technology, Engineering & Math Program (TEMP) is to create a pipeline of underserved students and investigators in the fields of emerging and advanced technologies, and to foster academic, scientific and multi-disciplinary research excellence. TEMP was designed to produce candidates for Ph.D. programs in bio-informatics, Ph.D. programs in bio-engineering, and Ph.D. programs in bio-statistics. TEMP provides an earlier start in the training pipeline to a national pool of minority child prodigies who desire a career in STEM, and seeks to develop and maintain interest in STEM among these minorities as they progress through junior high school, senior high school and college. TEMP encourages a diverse perspective within this population of students interested in STEM careers and provides a comprehensive training initiative that utilizes an integrated developmental regimen which prepares the students to successfully pursue a research career.

Web:  http://www.thedistancelearningcenter.org/training_programs/technology_engineering_and_math_program_TEMP.php
*Brown University: SPARK – Science For Middle School*

SPARK provides talented 7th and 8th grade students with the ideas, resources, and tools they need to nurture their academic gifts in the sciences. Courses in the SPARK program are specially created to expose students to the intellectual concepts and processes underlying familiar science topics through interaction with members of the Brown academic community and the facilities where research is being conducted. SPARK brings together students with similar abilities and diverse backgrounds to grow as individuals in an environment that is safe, challenging, and most of all, fun. Students participate in one course per session plus choose from a variety of co-curricular workshops. All students who successfully complete their course will receive a certificate of completion.

Web: http://brown.edu/ce/pre-college/spark/

**UC Santa Barbara: Summer Sessions Research Mentorship Program (UCSB-RMP)**

The Research Mentorship program is a hands-on program for highly motivated high school students interested in participating in the conduct of academic research in the social, life or physical sciences. You will enroll in two UCSB interdisciplinary courses (which provide the academic credit for the program). During the first week, about twenty potential projects will be presented to the whole class by UCSB researchers. From these, you will nominate five preferred projects. One of the researchers you nominated will be assigned as your research mentor, he or she will act as your faculty advisor as you work on a group or individual research project for the rest of the program. You will work in the lab, library and/or in the field, and be guided in research techniques, learning how to collect and analyze data, how to write a research paper and how to present your findings in a research symposium.

Web: http://www.summer.ucsb.edu/RMP/rmp.html

**Jackson Laboratory: Summer Student Program**

The Summer Student Program is designed to help students understand the nature of research science. The emphasis of this program is on methods of discovery and communication of knowledge, not the mastery of established facts. Under the guidance of a mentor, students develop an independent research project, implement their plan, analyze the data, and report their results. At the end of the summer, students present their findings to researchers, peers, and parents. Each year, the program consists of about thirty students from around the United States, from both high school and undergraduate institutions. Their varied interests and backgrounds create a lively, well-rounded atmosphere at the lab. Nestled on the border of Acadia National Park, The Jackson Lab is surrounded with possibilities for outdoor adventure. Between hiking, swimming, biking, and bird watching, lab employees and locals are continuously inspired by the pristine landscape.

Web: http://education.jax.org/summerstudent/program/

**Earthwatch Institute: Student Fellowships**

Earthwatch student fellows get to go—for free!—on one of more than ninety Earthwatch expeditions around the world to work with top scientists and other students in the field. While there, you’ll learn how to do field research and help find answers to the most challenging environmental issues of our time—and you’ll be making a difference for endangered animals and their habitats. You’ll get to use some of the latest technology (like GPS and radio-transmitters for tracking animals), learn about cutting edge research areas (like climate change), and work in places most people never get to see (like an Icelandic glacier or a Costa Rican volcano).

Web: http://www.earthwatch.org/aboutus/education/studentopp/

**Earthwatch Institute: Student Challenge Awards Program (SCAP)**

The Student Challenge Awards Program (SCAP) excites students’ imaginations, expands their potential, and stimulates their curiosity about science and technology. SCAP offers sophomores and juniors, ages 16 and 17, an opportunity to spend one to two summer weeks at a scientific field research station. SCAP is a competitive student fellowship program for students who excel in the arts and humanities, and have not had the opportunity to participate in a program like this before. Students are exposed to the latest scientific technology and innovative methods, and seeks to place them at research stations engaged in a wide range of projects. The program also supports the research and educational efforts of leading scientists by providing grants and opportunities to mentor talented students.

Web: http://www.earthwatch.org/aboutus/education/studentopp/scap/
Penn Medicine: Teen Research and Education in Environmental Science (TREES)
In 2007, the Center of Excellence in Environmental Toxicology began a community outreach and education program for high school students. The Teen Research and Education in Environmental Science (TREES) program is a unique summer research and mentorship program offering hands-on environmental research opportunities to motivated high school students. Each summer, approximately six high school students work one-on-one with mentors on projects that they choose and design.

Web:  http://www.med.upenn.edu/ceet/TREES.shtml

*U.S. Space and Rocket Center: Space Academy*
Space Academy immerses campers ages 12-14 into a 6-day experience that encourages teamwork, problem solving, communication skills, and self-confidence. Want to know what it’s like to train as a shuttle pilot, flight director, or mission scientist? Put your skills to the test as you are assigned different tasks in the orbiter, Mission Control, and the International Space Station. Astronaut simulator training will prepare you for the missions and anomalies that lie ahead. Gather your team’s strengths as the group takes on our low-ropes and Area 51 leadership confidence course. Choose one of three specialty tracks: Space, Aviation, and Robotics.

Trainees at Advanced Space Academy, a weeklong program for campers ages 15-18, get hands-on training and learn about the mental, emotional, and physical demands astronauts must face. Specialty tracks for this program: Mission Specialist and Pilot. The Advanced Space Academy program is a college-accredited program through the University of Alabama-Huntsville (UAH). All Advanced Space Academy participants will earn one hour of freshman-level general science credit from UAH

Web:  http://www.spacecamp.com/

UPenn Veterinary Medicine: VETS Summer Camp Program
The Veterinary School at the University of Pennsylvania will again offer a summer program for both college and high school students (11th and 12th graders). The Veterinary Exploration Through Science (VETS) program is an exciting experience held during the summer of 2012. This is a day program of one-week sessions. Three sessions have been designed specifically for college students and two sessions have been designed for high school students. The program has been created for those who are interested in the science of veterinary medicine.

Web:  http://www.vet.upenn.edu/EducationandTraining/StudentAdmissions/VETSSummerCamp/tabid/1506/Default.aspx

UPenn Institute for Regenerative Medicine: Summer Internship Program
This IRM Summer Internship Program is designed to provide high school students with an opportunity to conduct bench science in a state-of-the-art research facility. The program will require students to be dedicated learners, be open to new ideas, be diligent in their work habits, be intellectually honest, and be willing to work collaboratively and respectfully with fellow students and scientists.

Web:  http://irm.upenn.edu/Internships2012HighSchool

Vanderbilt University: Pre-College PAVE
PAVE is a six-week summer pre-college program designed to strengthen the academic skills of students who are planning to enter a college engineering, pre-medical, science, or technology program. If you are an eleventh grader and planning to take advanced placement or honors mathematics and science courses, the pre-college PAVE program will fortify your senior year and potentially improve your ACT, AP, SAT and TOEFL test scores while increasing your chances for admission when you apply to
college. If you are a graduating high school student and are planning to attend any institution, this program not only exposes you to campus life, but also provides you with the experience to overcome the rough spots you may encounter. In addition to strengthening your background, PAVE can help you decide if a technology-based degree is really the field for you. As a participant, you have the opportunity to improve your problem solving skills, technical writing skills, computer application skills, and laboratory skills by performing experiments in the sciences, pre-med and engineering disciplines. If, after your undergraduate degree, you are considering obtaining a business, economics, engineering, journalism, law or medical degree, you will benefit from having the experience that PAVE provides.

Web:  https://pave.vanderbilt.edu/" ayindex.php

University of Delaware College of Earth, Ocean, and Environment: TIDE Camp
The Summer TIDE Program is a 13-day instructional camp for high school students. This summer program focuses on the atmospheric, oceanic, and biogeochemical processes at work in the Delaware Bay. The camp activities include classroom instruction, discussions, lectures and visits to modern oceanographic/ atmospheric laboratories, as well as field excursions to the Delaware Bay for sampling and exploration. Students will gain an understanding of sea breeze, tides, habitat loss, species adaptation, salt-water marsh filtration, sediment transport, regional/local climate change, mitigation/adaptation opportunities, local impacts and strategies, and alternative energy.

Web:  http://www.ceoe.udel.edu/tide/

Sea Semester Summer Program: Science at SEA
This 20-day program for rising high school sophomores, juniors, and seniors focuses on the coastal and offshore marine environment around Cape Cod, Massachusetts. The program includes a shore component on the SEA campus in Woods Hole, and a sea component aboard one of SEA’s sailing research vessels, the SSV Corwith Cramer. During the shore component, students study the marine environment from a variety of perspectives—scientific, historical, literary, and nautical. This is an academic program complete with written assignments and tests. During the sea component, students study offshore oceanography, nautical science, and act as members of the ships crew. Students are evaluated on achievement and effort.

Web:  http://www.sea.edu/academics/program_scienceatsea.aspx

Sea Semester Summer Program: Oceanography of the Southern California Bight
This 3-week program for high school sophomores, juniors, and seniors focuses on the marine environments of the California coast. The program includes a shore component at the University of Southern California’s Wrigley Institute for Environmental Studies (WIES), and a sea component aboard one of SEA’s sailing research vessels, the SSV Robert C. Seamans. During the shore component, students study near-shore marine biology and ecology specific to the region. During the sea component, students study offshore oceanography, nautical science, and act as members of the ship’s crew.

Web:  http://www.sea.edu/academics/program_OSCB.aspx

Sea Semester Summer Program: Oceanography of the Gulf of Maine
This 3-week program is open to rising high school juniors, seniors, and college freshmen who have successfully completed two high school science courses. SEA and Cornell University’s Shoals Marine Lab have partnered to offer this course focused on the marine environments of the Gulf of Maine. The program includes a shore component at Shoals Marine Lab on Appledore Island, Maine, and a sea component aboard one of SEA’s sailing research vessels, the SSV Corwith Cramer. During the shore component, students study near-shore coastal ecology and oceanography specific to the region. During the sea component, students study offshore oceanography, nautical science, and act as members of the ship’s crew. Students earn three (3) undergraduate college credits from Cornell University upon successful completion of the program.

Web:  http://www.sea.edu/academics/program_OGM.aspx
Monmouth University: School of Science Summer Research Program (SRP)

The SRP is an outstanding opportunity for students to be part of a research team working with other students under the supervision of Monmouth University faculty and staff. Meaningful participation in a research project is one of the most valuable ways for students to improve their academic credentials for acceptance into graduate or professional school programs and for future employment in the sciences.

Highlights of the SRP include:
- Opportunity to be a researcher in a student-faculty collaborative research team.
- Employment as a paid student researcher for the summer.
- On-campus housing is available at reduced rates.
- Potential to earn college-credits for research experience.
- Gain research experience that is invaluable for future employment in industry and for entry into graduate and professional schools.
- Weekly lunches and social events to interact with students and faculty.
- Seminars on topics such as career development, research ethics, and graduate school.
- Present research at an informal symposium.

Web: http://www.monmouth.edu/academics/schools/science/summer_research_program/default.asp

The Summer Science Program: www.summerscience.org

The Summer Science Program (SSP) is a residential enrichment program in which gifted high school students complete a challenging, hands-on research project in celestial mechanics. By day, students learn college-level astronomy, physics, calculus, and programming. By night, working in teams of three, they take a series of telescopic observations of a near-earth asteroid, and write software to convert those observations into a prediction of the asteroid’s orbit around the sun. Stimulating guest speakers and field trips round out the curriculum. It now takes place at two campuses: New Mexico Institute of Mining and Technology in Socorro and Westmont College in Santa Barbara, California.

Web: http://www.summerscience.org

Drexel University College of Medicine: High School Summer Research Internship Program

Drexel University College of Medicine provides paid Summer Research Internships (HSSRI) to students from area high schools with an interest in biomedical research. The HSSRI program provides students with an opportunity to enhance their understanding of current biological/biomedical principles and their analytical/technical skills in a research environment. Research interns are mentored by Drexel Med faculty, who work in various disciplines, including biochemistry, molecular and cell biology, neuroscience, microbiology, immunology, pathobiology, pharmacology and physiology. The faculty and members of their laboratory guide students through the planning and practice of daily research experiments and activities. Each student is assigned to work in a specific laboratory for the duration of the program. Interns typically work on a unique project related to the research goals of that particular laboratory. Interns are integrated into the daily work of the laboratory, participating in laboratory meetings and gaining exposure to different facets of the laboratory’s research. Mentors help students apply their current knowledge and skills and assist them in making the connection between laboratory experiences and their academic studies. Students are expected to participate a minimum of 25 hours per week to a maximum of 40 hours per week. Although the schedule is flexible, students are required to complete the eight-week program and to participate in all program activities. Students will receive a $1,500 stipend for the full eight weeks.

Web: http://www.drexelmed.edu/Home/AcademicPrograms/BiomedicalGraduateStudies/SummerResearchOpportunities/HighSchoolSummerResearchInternshipProgram.aspx
Jefferson University School of Population Health: Global Health Academy @ Jefferson
The Global Health Academy @ Jefferson is designed specifically for high school students interested in international affairs and global health. The program provides ample opportunities to participate in discussion and interaction with global health experts, hands-on activities, field trips, and research projects and presentations. Students will learn important concepts and gain a deeper understanding of global health—everything from infectious diseases, natural disasters, water shortages, and the international resources, agencies, and technologies that respond to these challenges. The program features highly interactive presentations and a comprehensive approach of the social, political, economic, scientific, and ethical aspects of global health.

Web: www.jefferson.edu/population_health/gha.cfm

The Forensics Mentors Institute: G. John DiGregorio Summer Mentoring Program
The Forensics Mentors Institute is now accepting applications for the 2012 G. John DiGregorio Summer Science Program. This is an eight-week program in forensic science for Philadelphia-area high school students aged 16 and older. The mission of FMI is to provide opportunities for growth and development in science, particularly forensic science, to young people making decisions about their careers and futures. We emphasize an intensive hands-on laboratory experience, which encourages development of self-confidence and personal growth. Stipends and scholarships are available for qualifying students.

Web: http://www.frfoundation.org/g-john-digregorio-summer-mentoring-program/

Monell Center: Science Apprenticeship Program
An intensive seven-week internship allows students to participate in structured research experiences, as well as in a number of enrichment activities. These budding scientists gain an increased appreciation of the chemical senses, and also valuable experience in the world of working scientists: a demystification of science, the development of critical thinking skills, and hands-on experience of the scientific process.

Web: http://www.monell.org/education_training/science_apprenticeship_program/