

New Jersey STEM Database

The Research & Development Council of New Jersey is committed to supporting excellence in science, technology, engineering and math (“STEM”) education in New Jersey. STEM education is at a critical point in the United States. The U.S. lags behind other nations in STEM education at the elementary and secondary levels. Home to Thomas Edison and the first R&D facility in the world, New Jersey has thrived in STEM. It can continue to be a leader in STEM education and serve as a model to the rest of the country. To support New Jersey STEM education, the Research & Development Council of New Jersey is proud to launch the New Jersey STEM Database.

The New Jersey STEM Database was developed because of the R&D Council’s commitment to STEM excellence, and because the Council fully understands that to innovate, discover and achieve in STEM we must sustain the pipeline of talented individuals who fill New Jersey’s research labs and classrooms. To do so, improvements in STEM education must focus on 1) ensuring that teachers are well-equipped to educate student in STEM areas and 2) inspiring students to achieve in STEM and to pursue careers in these fields.

The following pages include hundreds of initiatives and programs with the goal of advancing STEM education for both students and educators. We are proud to say that many of these initiatives and programs are spearheaded and supported by the R&D Council’s members, including: **Bristol-Myers Squibb, Celgene, ExxonMobil Cooperation, Rothman Institute at Fairleigh Dickinson University, GlaxoSmithKline, Honeywell, Johnson & Johnson, Liberty Science Center, Merck, Montclair State University, NJIT, Novartis, Princeton Plasma Physics Lab, PSE&G, Roche, Rutgers University, Sabinsa, Stevens Institute of Technology and UMDNJ.**

We encourage you to share this document with students, educators, policymakers and others to ensure that all New Jerseyans are educated about the wonderful STEM programming taking place in and around our great state. This is a working document and we ask those who have additional programs, or edits to the current list of programs, to contact our office so that we can update our database with your information.

The Research & Development Council of New Jersey is a nonprofit organization dedicated to cultivating an environment that supports the advancement of research and development in New Jersey. The Council's membership is made up of representatives from academia, government and industry. Its accomplishments include: recognizing numerous New Jersey patents each year with the Edison Patent Award, raising the funds for the design and construction of the Liberty Science Center, and annually awarding scholarships to college students pursuing an education in STEM related fields.

To learn more about the Research & Development Council of New Jersey, please visit www.rdnj.org or call (973) 274-8336.

New Jersey STEM Database

TABLE OF CONTENTS

<u>Level of Programming</u>	<u>Page Numbers</u>
P-20 Student STEM Programming	2-24
Pre-K and Elementary School	3-4
Middle School	5-7
High School	8-16
University/Post Graduate	17-18
Minority and Female Students	19-21
Students (general)	22-24
Educator STEM Programming	24-29
Pre-K and Elementary School	26
Middle School	27
High School	27-28
Educators (general)	29-30
General STEM Programming	31-38

P-20 Student STEM Programming

STEM PROGRAM	ELEMENTARY SCHOOL STUDENTS	DESCRIPTION
<u>Montclair State University's Academically Gifted and Talented Youth Program</u>	K-11 Students	Montclair State University's Academically Gifted and Talented Youth Program provides accelerated, inquiry based courses designed to meet the unique intellectual and social needs of high ability students. Gifted students in grades K-11 have an opportunity to enroll in fall and spring weekend courses as well as a six-week summer camp.
<u>Community Connection Tutoring Program</u>	K-12 Students	The mission of the Community Connection Mentoring Program (CCMP) at Montclair State is to develop in K-12 students the requisite skills, knowledge and dispositions that will enable them to become highly effective students.
<u>New Jersey Institute of Technology's Environmental Science and Engineering Program (ESEP)</u>	Post-4 th Grade Students	The Environmental Science and Engineering Program (ESEP) is a five-week program designed to provide post-4th grade students with an introduction to Environmental Science and Engineering.
<u>Great Minds in STEM</u>	All Ages	Great Minds in STEM is a non-profit organization that focuses on STEM educational awareness programs for students from kindergarten to career. Great Minds in STEM™ provides resources for recognition and recruitment of Hispanics in STEM on a national level, connecting multi-areas of engineering and science arenas to the general population.
<u>Rutgers University's Math & Science Learning Center</u>	Kindergarten through University Students	The MSLC is a unique resource for students in the sciences. It is committed to providing support services for University students and outreach programs for K-12 students. Special to the MSLC are the hands-on interdisciplinary science demonstrations and activities.
<u>Cablevision's Power to Learn Initiative</u>	Grades K-12	Power to Learn, Cablevision's nationally recognized education initiative, empowers K-12 learning in the tri-state area by making technology in the classroom useful and by facilitating the home-school connection.
<u>Sprint Foundation Grants</u>	Grades K-12	The Sprint Foundation supports K-12 education, particularly those initiatives that focus on character education.
<u>New Jersey Institute of Technology's Women in Engineering & Technology (WEIT) Initiatives-FEMME Program</u>	Post-4 th - Post-8 th Grade Females	NJIT's Women in Engineering and Technology Initiative-FEMME Program is a five-week program designed to provide post-fourth through post-eighth grade girls with opportunities to enhance their mathematics, science and technological academic achievement, develop problem-solving and critical thinking skills, and promote self-esteem and self-confidence.

STEM PROGRAM	MIDDLE SCHOOL STUDENTS	DESCRIPTION
<u>Montclair State University's Academically Gifted and Talented Youth Program</u>	Grades K-11	Montclair State University's Academically Gifted and Talented Youth Program provides accelerated, inquiry based courses designed to meet the unique intellectual and social needs of high ability students. Gifted students in grades K-11 have an opportunity to enroll in fall and spring weekend courses, as well as six-week summer camp.
<u>New Jersey Institute of Technology's Aeronautical Engineering Program (AEP)</u>	Post-5 th Grade Students	The Aeronautical Engineering Program (AEP) is a five-week program designed to provide post-5 th grade students with an introduction to Aeronautical Engineering.
<u>ExxonMobil's Bernard Harris Summer Science Camp</u>	Grades 6-8	The ExxonMobil Bernard Harris Summer Science Camp (EMBHSSC) is a two-week residential camps hosted at colleges and universities across the nation. In the summer of 2010 The Harris Foundation (THF), in partnership with the ExxonMobil Foundation, sponsored a total of 30 residential camps held during the months of June-August and provided free of charge to participants. Each camp will provide 48-54 promising middle school grade level students the opportunity to enhance their proficiency in Science, Technology, Engineering and Mathematics (STEM) education.
<u>Community Connection Tutoring Program</u>	Grades K-12	The mission of the Community Connection Mentoring Program (CCMP) is to develop in K-12 students the requisite skills, knowledge and dispositions that will enable them to become highly effective students.
<u>ECC – College Bound Tech</u>	Pre-college middle school students	The College Bound Tech provides pre-college middle school students with academic classes in language arts, math, science and technology. The academic year and summer session activities include counseling, tutoring, career and college planning, educational field trips and college campus tours.
<u>eCYBERMISSION</u>	Grades 6-9	eCYBERMISSION is a web-based science, math and technology competition for 6 th , 7 th , 8 th and 9 th grade teams. Teams propose a solution to a real problem in their local community and compete for regional and national awards. eCYBERMISSION challenges students to explore how science, math and technology work in our world.
<u>New Jersey Institute of Technology's Environmental Science and Engineering Program (ESEP)</u>	Post-4 th Grade Students	The Environmental Science and Engineering Program (ESEP) is a five-week program designed to provide post-4 th grade students with an introduction to Environmental Science and Engineering.

<u>New Jersey Institute of Technology's Explore Careers in Technology and Engineering (ExCITE)</u>	Post-7 th Grade Students	The Explore Careers in Technology and Engineering (ExCITE) program is a five-week program designed to introduce post-7 th grade students to Civil and Industrial Engineering.
<u>The United States Army's Gains in the Education of Mathematics and Science (GEMS)</u>	Grades 6-8	Gains in the Education of Mathematics and Science (GEMS) Students spend at least one week during the summer at U.S. Army Research Laboratory (ARL) Adelphi or Aberdeen Proving Ground (APG), Maryland, and receive \$100 for each week attended. Over 105 middle school students participate in summer programs in robotics, solar car, composite materials, polymer science and computer science.
<u>Great Minds in STEM</u>	All ages and grades	Great Minds in STEM is a non-profit organization that focuses on STEM educational awareness programs for students from kindergarten to career. It provides resources for recognition and recruitment of Hispanics in STEM on a national level, connecting multi-areas of engineering and science arenas to the general population.
<u>New Jersey Institute of Technology's Introduction to Chemical Industry in Engineering Program (IchIME)</u>	Post 7 th and 8 th Grade Students	The Introduction to Chemical Industry in Engineering (IchIME) program is a five-week program designed to give post-7 th and 8 th grade students an opportunity to increase their understanding, awareness, and participation in the field of Chemical Engineering.
<u>Rutgers University's Math & Science Learning Center</u>	Grades K-12 and University Students	The MSLC is a unique resource for students in the sciences. It is committed to providing support services for University students and outreach programs for K-12 students. Special to the MSLC are the hands-on interdisciplinary science demonstrations and activities.
<u>MATHCOUNTS</u>	Grades 6-8	MATHCOUNTS is a national competition that focuses on math enrichment, coaching and competition to promote middle school mathematics achievement through grassroots involvement in every U.S. state and territory.
<u>Montclair State University's Passaic River Basin Environmental Science and Computer Technology Program</u>	7 th and 8 th grade students in Newark, NJ	The Passaic River Institute runs an environmental science and computer technology summer program for incoming 7 th and 8 th grade students in Newark. It runs all day for three two-week sessions, with about 20 students in each session. The program focuses on the Passaic River basin and Newark Bay, combining site tours, environmental education lessons, computer software lessons and recreational activities. Students learn how to apply computer technology to investigate a site or related issue and develop a presentation to explain an important environmental issue related to one of the sites visited.
<u>Power to Learn Initiative</u>	Grades K-12	Power to Learn, Cablevision's nationally recognized education initiative, empowers K-12 learning in the tri-state area by making technology in the classroom useful and by facilitating the home-school connection.

<u>New Jersey Institute of Technology's Pre-Engineering Program (PrEP)</u>	Post-6 th Grade Students	The Pre-Engineering Program (PrEP) is a five-week program designed to provide academically talented post-6th grade students with an introduction to Mechanical Engineering.
<u>Project Lead the Way</u>	Grades 6-8	PLTW partners with middle schools and high schools to provide a rigorous, relevant STEM education. Through an engaging, hands-on curriculum, PLTW encourages the development of problem-solving skills, critical thinking, creative and innovative reasoning and a love of learning.
<u>Ramapo Explorers Summer Academic Camp</u>	Middle School Students Entering Grades 7 and 8	The Ramapo Explorers Middle School Academic Camp focuses on hands-on learning activities while having fun. The program is for middle school children entering 7th and 8th grades. Students in 6th grade may apply by special recommendation only.
<u>ExxonMobil's Reasoning Mind</u>	Grades 6-8	Reasoning Mind is an innovative, Web-based math education program using sophisticated artificial intelligence, interactive graphics and a world-class curriculum to actively engage middle school students in math. ExxonMobil helps fund development costs and facilitates public/private partnerships to help implement this leading edge program in schools serving disadvantaged students across the United States.
<u>Rowan University's CHAMP/GEAR UP</u>	Grades 7-12	C.H.A.M.P. (Creating Higher Aspirations and Motivations Project)/ GEARUP (Gaining Early Awareness and Readiness for Undergraduate Programs) is a College Bound program serving 7th through 12th grade students in Camden City, Millville, Vineland and Bridgeton Public Schools.
<u>Rutgers-Camden University's Future Scholars Program</u>	Grades 6-8	The Rutgers-Camden Future Scholars Program introduces first-generation, low-income and academically talented middle school students to the promise and opportunities of a college education. Students who successfully complete the pre-college initiative and are admitted to Rutgers will receive a scholarship covering the cost of their tuition for four years funded through a range of grants and donations.
<u>ExxonMobil's Science Ambassador Program</u>	Grades 6-8	ExxonMobil employees participate in an in-class volunteer program focused on education in science, technology, engineering and mathematics targeted at middle school students.
<u>Sprint Foundation Grants</u>	Grades K-12	The Foundation is committed to supporting K-12 education, particularly those initiatives that focus on character education.
<u>University of Medicine and Dentistry's SMART Initiative</u>	Grades 8-12	UMDNJ's SMART Initiative (Science, Medicine And Related Topics Pipeline) is a set of pre-college health related educational enrichment programs for students entering grades 8-12. Its mission is designed to assist participants in acquiring a strong background in the sciences and to cultivate interest in health careers. Programs are offered during the winter and summer.

<u>New Jersey Institute of Technology's Women in Engineering & Technology (WEIT) Initiatives-FEMME Program</u>	Post-4th - Post-8th Grade Females	The Women in Engineering and Technology Initiative-FEMME Program is a five-week program designed to provide post-fourth through post-eighth grade girls with opportunities to enhance their mathematics, science and technological academic achievement, develop problem-solving and critical thinking skills, and promote self-esteem and self-confidence.
<u>Students 2 Science</u>	Middle and High school students	Students 2 Science offers programs, centered at a commercial-grade Technology Center. The focus is on changing students' attitudes toward pursuing careers in Science, Technology, Engineering and Math (STEM); and improving student aptitude with STEM subject matter.

STEM PROGRAM	HIGH SCHOOL STUDENTS	DESCRIPTION
<u>Montclair State University's Academically Gifted and Talented Youth Program</u>	Grades K-11	Montclair State University's Academically Gifted and Talented Youth Program provides accelerated, inquiry based courses designed to meet the unique intellectual and social needs of high ability students. Gifted students in grades K-11 have an opportunity to enroll in fall and spring weekend courses as well as a six-week summer camp.
<u>Burlington County College's College Bound Program</u>	Grades 9-12	The College Bound program, funded by the Commission on Higher Education, targets 60 high school students from the districts of Burlington City and Pemberton Township. The grant supports pre-college educational and enrichment activities to ensure that students complete high school and successfully pursue post-secondary careers in math, science, or technology.
<u>Camden County's College Bound Program</u>	Grades 9-12 in Gloucester City	This is a pre-college enrichment program designed to help Gloucester City high school students complete secondary school and successfully pursue a post-secondary education in the sciences, mathematics, or technology.
<u>Camden County's College Upward Bound Program</u>	Grades 9-12	Upward Bound provides opportunities for high school students to succeed in their pre-college performance and higher education pursuits. It serves low-income students and families in which neither parent holds a bachelor's degree.
<u>Center for Talented Youth Summer Program for 10th-12th Graders at Princeton University</u>	Grades 10-12	This is a three-week residential summer program for academically talented high school students, grades 10 and above. By bringing together academically talented students from all over the country to wrestle with global issues facing the world today, the CTY summer program is able to offer an educational experience that is geared both to the students' high abilities and to their need for peers who share their academic abilities and their love of learning.
<u>Community Connection Tutoring Program</u>	Grades K-12	The mission of the Community Connection Mentoring Program (CCMP) is to develop in K-12 students the requisite skills, knowledge and dispositions that will enable them to become highly effective students.
<u>Dixon Mentoring in Engineering Program (DMEP)</u>	Grades 9-12	This program motivates high school students to consider a career in the engineering or science field. Its intent is to provide the student with an understanding and appreciation of the various roles of an engineer. Participants have fun while being exposed to what engineering is all about.
<u>Dow Co-op Program</u>	Grades 9-12	Dow collaborates with U.S. universities and colleges to offer a co-op program that allows students to work for Dow. Participants can receive compensation or class credit through the program.

<u>Alcatel-Lucent's Education Frontiers for Young Women and Youth in Under-Served Communities Program</u>	Grades 9-12 Targets Minorities and Females	The goal of “The Education Frontiers for Young Women and Youth in Under-Served Communities Program” is to increase the number of participants from underrepresented groups in the fields of science, technology, engineering and math. Applicants for this program are females of any ethnicity, or males of African American, Hispanic or Native American descent.
<u>eCYBERMISSION</u>	Grade 9	eCYBERMISSION is a web-based science, math and technology competition for 6th, 7th, 8th and 9th grade teams. Teams propose a solution to a real problem in their local community and compete for regional and national awards. eCYBERMISSION challenges students to explore how science, math and technology work in our world.
<u>Fairleigh Dickinson University's FDU Middle College Program</u>	Grades 11-12	The Middle College Program now services more than 2,600 honors-level, college-bound juniors and seniors annually, affording them the opportunity to experience university-style learning before they even graduate high school and giving them a head start on their college education. Participating students may attain advanced standing and college credit through the Program.
<u>Bristol-Myers Squibb's For Inspiration and Recognition of Science and Technology (FIRST)</u>	Grades 9-12	For Inspiration and Recognition of Science and Technology (FIRST) is a high school robotics team competition. It combines the spirit of an athletic competition with an engineering challenge to expose high school students to the rigors of an engineering or research career. Teams plan, design, prototype and build a robot and then compete in an engineering challenge that looks like a high-tech sporting event. Bristol-Myers Squibb is a major sponsor of six New Jersey high school robotics teams of FIRST (Foundation for the Inspiration and Recognition of Science and Technology). In addition to providing financial support for local high school teams, Bristol-Myers Squibb employees also regularly serve as mentors to students participating in robotics competitions.
<u>New Jersey Institute of Technology's Fundamentals of Physical Sciences (FPS)</u>	Grades 9-12	The Fundamentals of Physical Sciences (FPS) Program is a five-week program designed to prepare students for college-level work while they are still in high school.
<u>Gloucester City College Bound</u>	Grades 9-12	GCCB supports pre-college educational and enrichment activities that encourage students to complete high school and successfully pursue postsecondary careers in math, science, or technology. Grant funds provide for on-campus programs, workshops and year-round educationally enriched activities. During the summer, high school freshmen, sophomores, and juniors participate in a college-prep program at the Blackwood Campus of Camden County College and attend classes taught by college professors, instructors and tutors.

<u>Great Minds in STEM</u>	All Ages and Grades	Great Minds in STEM is a non-profit organization that focuses on STEM educational awareness programs for students from kindergarten to career. Great Minds in STEM™ provides resources for recognition and recruitment of Hispanics in STEM on a national level, connecting multi-areas of engineering and science arenas to the general population.
<u>Governor's School of Engineering and Technology</u>	Grade 12	The Governor's School of Engineering & Technology is a summer residential program hosted by Rutgers School of Engineering. The program provides its scholars with a comprehensive enrichment course of study with emphasis placed on engineering and technology skills and career exploration. Scholars attend required and elective classes, work on small-group research projects, visit local corporations to learn about career opportunities, hear from guest speakers from academia and industry, and participate in other enrichment activities. High school students who have completed their junior year and who possess outstanding STEM skills are nominated by their high schools to apply to the program.
<u>Governor's School in the Sciences</u>	Grade 12	The Governor's School in the Sciences is a summer residential program hosted by Drew University. The program broadens its scholars' appreciation and knowledge of science through exposure to a range of scientific topics and scientists. The program introduces scholars to a hands-on research experience in a student's area of interest through a series of courses, laboratories, projects, lectures, and other activities centered on math and science. Students learn about possible career paths from Drew's faculty and from some of New Jersey's leading industrial, governmental, and academic representatives. High school students who have completed their junior year and who possess outstanding math and science skills are nominated by their high schools to apply to the program.
<u>Hudson County Community College's Project L.E.A.P. (Learning Enables All Possibilities)</u>	Grade 12	Project L.E.A.P. enables high school seniors to enroll in up to three college-level courses per semester and earn credits towards a degree. The courses may be offered during or after the school day at a high school campus or the college campus.
<u>Junior Science and Humanities Symposium (JSHS)</u>	Grades 9-12	Junior Science and Humanities Symposium (JSHS) is an annual high school science competition designed to encourage and develop oral presentation skills and the ethical conduct of original research. JSHS awards scholarships to highly talented students from across the nation. ARL scientists and engineers serve as judges in the Maryland regional competition, provide students with mission related research topics, and provide national winners with summer internships.

<u>Lockheed Martin K-12 Mentoring Program</u>	Grades K-12	This is a formal mentoring program in which Lockheed Martin employees nationwide engage students in structured and meaningful mentoring relationships. More than 4,000 students benefit annually, and the program continues to grow.
<u>Rutgers University's Math & Science Learning Center</u>	Grades K-12 and University Students	The MSLC provides support services for University students and outreach programs for K-12 students. Special to the MSLC are the hands-on interdisciplinary science demonstrations and activities.
<u>Rutgers University's NCRC Career Summer Institute</u>	Grades 9-12	The Nontraditional Career Resource Center bridges the education and workforce development communities to provide students opportunities and awareness for nontraditional careers. It is a summer residential program for high school students that build career development and leadership skills needed to succeed after high school. Students participate in career assessments, explore various in-demand careers in NJ, and plan social action projects for their home schools and communities.
<u>The Liberty Science Center's Partners in Science Program</u>	Grades 11-12	LSC's Partners in Science program provides an intensive, eight-week summer experience for high school juniors and seniors. The program pairs students with mentors in science, health and technical fields and challenges them to participate in ongoing research and independent projects.
<u>Montclair State University's Passaic River Environmental Education and Monitoring Organization</u>	Grades 9-12	This program brings together high school students from communities across the socioeconomic spectrum within New Jersey's Passaic River basin. Students study and monitor benthic ecology and water quality in their community, learn how rivers are affected by land use and industry, and discover how rivers are used and what they mean to different communities.
<u>Princeton's Plasma Physics Lab's Plasma Camp</u>	Grades 9-12	The Plasma Science and Fusion Energy Institute is a one-week intensive workshop designed to provide the opportunity to study plasma physics and fusion energy through experimental research in our state-of-the-art laboratories. Participants will perform experiments, in collaboration with laboratory scientists, which investigate the basic properties of plasmas. Finally, plasmas are ideal to illustrate many concepts in high school physics curricula including waves, atoms, nuclear reactions, relativity, electricity and magnetism.
<u>Power to Learn Initiative</u>	Grades K-12	Power to Learn, Cablevision's nationally recognized education initiative, empowers K-12 learning in the tri-state area by making technology in the classroom useful and by facilitating the home-school connection.

<u>Princeton University's Materials Academy</u>	Grades 9-12	Princeton University Materials Academy (P.U.M.A.) is a program committed to improving the science education of under-represented high school students in Trenton, NJ and the surrounding districts. P.U.M.A. brings 30-50 high school students to the labs of the Princeton Center for Complex Materials (PCCM) for 2-3 weeks every summer to teach them about science and engineering. Students learn through hands-on, inquiry-based activities, labs modeled after actual experiments currently done by PCCMs researchers, and lectures by faculty members and lead teachers. Topics covered include nanotechnology, cancer research and materials science.
<u>Seton Hall University's Project Acceleration</u>	Grads 9-12	Over the course of their high school career, students can earn up to 22 credits from Seton Hall University for approved courses taken in their secondary schools. Subjects include mathematics, computer science, biology, chemistry, physics, economics, psychology, political science, sociology, history, communication, English, French, German, Spanish, Italian, Latin, Greek, Japanese, music, art, and education. The college credits earned through Project Acceleration are accepted at more than 200 colleges and universities. There are currently 70 high schools offering Project Acceleration courses.
<u>Project Lead the Way</u>	Grades 6-12	PLTW partners with middle schools and high schools to provide a rigorous, relevant STEM education. Through an engaging, hands-on curriculum, PLTW encourages the development of problem-solving skills, critical thinking, creative and innovative reasoning and a love of learning.
<u>New Jersey City University's Proyecto Science</u>	Grades 9-12	This is a six-week summer program that focuses on advancement in mathematics, sciences, computer science and technology for select middle and high school students.
<u>Ramapo University's Pre-College Experience</u>	Grades 9-12	The Pre-college Experience at Ramapo College invites applications from students in good academic standing who wish to experience college life early to learn the academic and social skills necessary for success in college. Students may earn transferable college credit or choose a non-credit experiential program.

<u>Research and Engineering Apprentice Program (SEAP)</u>	Grades 9-12	Science and Engineering Apprentice Program (SEAP) is a DOD sponsored summer Science and Engineering Apprentice Program that provides students with invaluable experience and exposure to the world of scientific research. The program offers apprenticeships to high school students interested in science and engineering. The students are assigned to a participating laboratory to pursue scientific experiences with a scientist or engineer who serves as mentor to the apprentice for eight continuous weeks. Students will be selected on the basis of grades, science and mathematics courses taken, scores on national standardized tests, hobbies, areas of interest, teacher recommendations, and personal statement.
<u>Rowan University's CHAMP/GEAR UP</u>	Grades 7-12	C.H.A.M.P. (Creating Higher Aspirations and Motivations Project)/ GEARUP (Gaining Early Awareness and Readiness for Undergraduate Programs) is a College Bound program serving 7th through 12th grade students in Camden City, Millville, Vineland and Bridgeton Public Schools.
<u>Rutgers-Camden University's Biz Ed Program</u>	Grades 9-12	Biz Ed is a unique program that offers outstanding high school students from Burlington, Camden and Gloucester counties an intensive and fun introduction to collegiate business education. It is designed to spark creativity, develop decision-making skills and reinforce the concept that the business world offers exciting and profitable career opportunities. The two-week session was developed by Rutgers University School of Business–Camden. The curriculum introduces students to the theory and practice of accounting, finance, management, marketing and technology.
<u>Rutgers-New Brunswick University's Douglass Science Institute</u>	Females Entering 9 th Grade	The Douglass Science Institute (DSI) is a four-year summer residential program for young women entering 9th grade who want to explore a variety of areas including biology, chemistry, computer science, environmental and marine sciences, engineering, physics, and mathematics.
<u>Sanofi-Aventis International's BioGENEius Challenge</u>	Grades 9-12	The Sanofi-Aventis International BioGENEius Challenge is a competition for high school a student that conducts original research in biotechnology. Held each year at the Biotechnology Industry Organization (BIO) convention and organized by the Biotechnology Institute, it is considered the most prestigious high school science competition, with the winner each year receiving \$7,500

<u>Rutgers University's Scholars Training and Enrichment Program (STEP)</u>	High School Graduates	The Scholars Training and Enrichment Program (STEP) assists high school graduates from Newark and other urban areas who will matriculate to the Newark campus of Rutgers Business School. The purpose of STEP is to enhance these high school graduates' success toward getting an RBS undergraduate degree. The STEP Fellows spend six (6) weeks in this residential program on campus and attend a variety of non-credit pre-enrollment courses during the summer before they start their official undergraduate courses the following September.
<u>Science Olympiad</u>	Grades 9-12	Annual science competition for both middle and high school students.
<u>Sprint Foundation Grants</u>	Grades K-12	The Sprint Foundation supports K-12 education, particularly those initiatives that focus on character education.
<u>The Dorothy Dillahunty Summer Research Program for High School Students</u>	Grades 9-12	The program helps scientifically talented and economically disadvantaged high school students pursue their interest in biomedical research. The program supports three or more high school students, for the summer between their junior and senior years, to come to the Newark campus of the Graduate School of Biomedical Sciences to work in a research laboratory for an 8-10 week period. These students will partner with college, graduate, or post-doctoral students working in faculty research labs. The program allows talented high school students, who otherwise would be economically unable to spend the summer doing research, to better their science education and perhaps motivate them to a career in biomedical research.
<u>University of Medicine and Dentistry of New Jersey's SMART Initiative</u>	Grades 8-12	The SMART Initiative (Science, Medicine And Related Topics Pipeline) is a set of pre-college health related educational enrichment programs for students entering grades 8-12. Its mission is designed to assist participants in acquiring a strong background in the sciences and to cultivate interest in health careers. Programs are offered during the winter and summer.
<u>The Public Health Research Institute Summer Research for High School Students</u>	Grades 9-12	The Summer High School Research Internship Program serves minority students who attend high schools, or live in, Newark, NJ and their science teachers. Its goal is to nurture, through hands-on laboratory research experiences, the students' interest in science.

<u>University of Medicine and Dentistry's Pre-Medical Honors Program</u>	Grades 9-12	The Pre-Medical honors program is designed to attract promising high school students to medicine and the health sciences and is offered during the fall. Mini-Med School is a similar program offered to adults. Both nine-week courses take place Wednesdays 5:45 p.m.-9:15 p.m. Each program includes 195 minutes of lectures and seminars. The programs address recent findings in medical research and healthcare, raise consciousness about the routes to medical care, and enhance one of the principle missions of New Jersey Medical School — to train socially conscious and humane physicians.
<u>Uninitiates' Introduction to Engineering (UNITE) Program</u>	Grades 9-12	Uninitiates' Introduction to Engineering (UNITE) Program provides high school students with the opportunity to participate in college-structured summer courses that feature hands-on applications, participation in lectures, problem solving techniques, and tours of private and governmental laboratory and engineering facilities. Students receive classroom instruction in courses such as chemistry, physics, algebra, and calculus. They are introduced to math and science applications and how these applications are applied to real-world situations. The students are also shown how these applications are related to careers in engineering and technology. The UNITE program is designed to support social and economically disadvantaged high school students.
<u>Kean University's Upward Bound TRIO Programs</u>	Grades 9-12	Upward Bound serves high school students from low income families and high schools students in which neither parent holds a bachelor's degree. The goal of Upward Bound is to increase the rate at which participants complete secondary education and enroll in and graduate from institutions of post-secondary education. The Upward Bound Program at Kean University holds academic year Saturday sessions and a six week summer residential program. The program provides instruction in math, science, English, foreign language, tutoring, and SAT preparation.
<u>Rowan University's Upward Bound for English Language Learners</u>	Grades 9-12, Camden Students	The Upward Bound program at Rowan is unique in that it specifically serves English Language Learners in the Camden high schools that come from low-income families and are First Generation College bound. Recognizing the need for these students to enhance their content knowledge and language proficiency, the academic courses offered through Upward Bound use content-based instruction approach, which focuses on English language acquisition while providing much needed content knowledge.

<p><u>Young Science Achievers Program (YSAP)</u></p>	<p>Grades 9-12, Targets Minorities and Females</p>	<p>The Young Science Achievers Program offers grants of up to \$500 per project for projects with two or more students in the project. A project submitted by one student is limited to a total funding of \$250. YSAP serves public and private high schools (grades 9 through 12) throughout the state of New Jersey and New York City and is open to all applicants but targets young women of any ethnicity and males of African American, Hispanic, or Native American descent.</p>
<p><u>Students 2 Science</u></p>	<p>Middle and High school students</p>	<p>Students 2 Science offers programs, centered at a commercial-grade Technology Center. The focus is on changing students' attitudes toward pursuing careers in Science, Technology, Engineering and Math (STEM); and improving student aptitude with STEM subject matter.</p>

STEM PROGRAM	UNIVERSITY AND POST-GRADUATE STUDENTS	DESCRIPTION
<u>Abbott U.S. Internship Programs</u>	University Students	The focus of the Abbott Internship Program is to target and hire the most talented intern candidates from outstanding universities across the globe. By developing a high performing pool of interns, Abbott is able to build a deep talent pipeline for the Professional Development Programs and other entry level hiring opportunities. Interns work on projects that impact the business and provide meaningful professional hands-on experience and exposure to the healthcare industry.
<u>AT&T Labs Fellowship Program (ALFP)</u>	Women and Minority Doctoral Students	The AT&T Labs Fellowship Program (ALFP) offers three-year fellowships to outstanding under-represented minority and women students pursuing PhD studies in computing and communications-related fields.
<u>Bayer Fellowship Programs</u>	University Students	The Bayer Science & Education Foundation promotes training opportunities for talented university students of the natural sciences and medicine and for ambitious young people with a non-academic background.
<u>New Jersey Institute of Technology's C2PRISM – Computation and Communication: Promoting Research Integration in Science and Mathematics</u>	Doctoral Students	Computation and Communication: Promoting Research Integration in Science and Mathematics (C2PRISM) is one of New Jersey's most recently funded NSF Graduate Teaching Fellows in K-12 Education (GK-12) projects. The program supports fellowships and training for doctoral students in science, computing, engineering, and mathematics (STEM) to interact with teachers and students in four Newark high schools, bringing their doctoral research into the classroom while improving their communication and teaching skills and enriching STEM content and instruction for their high school partners.
<u>Dow Manufacturing and Engineering Internships</u>	University Students	Dow recruits at selected universities and other venues to identify engineering students for internship opportunities available where we have manufacturing facilities. These internships are an excellent way to gain valuable experience in one of the many roles within Manufacturing & Engineering. Generally, the program requires students to have completed their second year of engineering studies as well as selected an engineering discipline for which Dow recruits.
<u>GradOpp HBCU STEM Fellowship Program</u>	Graduate Students	The Fellowship Program provides financial assistance to students who graduated from a four-year college or university designated as a Historically Black Colleges and Universities as determined by the White House Initiative and wishes to pursue a graduate degree in STEM at a college or university in Pennsylvania, New Jersey, Delaware or Washington, DC.

<u>Bristol-Myers Squibb's Middlesex County College Health Care Scholarships</u>	Middlesex County College Students	Bristol-Myers Squibb supports scholarships at Middlesex County College in Edison, New Jersey, for students pursuing careers in health care, with a focus on those in the Psychosocial Rehabilitation and Treatment Program, where students learn how to help people with psychiatric disabilities through social, vocational and other challenges of daily life.
<u>National Society of Black Engineers' Programs, Competitions and Scholarships</u>	African American engineering students and professionals	The National Society of Black Engineers is a non-profit association that is owned and managed by its members. The organization is dedicated to the academic and professional success of African-American engineering students and professionals.
<u>Princeton's Plasma Physics Lab's National Undergraduate Fellowship Program in Plasma Physics and Fusion Energy Sciences</u>	Undergraduate Students	The National Undergraduate Fellowship Program in Plasma Physics and Fusion Energy Sciences provides outstanding undergraduates with an opportunity to conduct research in the disciplines that comprise the plasma sciences in general and fusion research in particular.
<u>Rutgers University's NSF GK-12 Program</u>	Rutgers University Graduate and Undergraduate Students	This program partners Rutgers University graduate and undergraduate students in science, mathematics, engineering and technology with middle school teachers in local school districts.
<u>Passaic County Community College's STEM Summer Bridge Program</u>	Incoming College Freshman Students	To help make the transition from high school to college for incoming freshman, PCCC offers special sessions in July and August where students attend classes, free of charge, in PCCC's new STEM Learning Center and experience a stimulating environment that incorporates discovery, hi-tech, and hands-on group learning.
<u>Research & Development Council Merit Scholars</u>	New Jersey County College Students	Each year, the Council awards up to 10 outstanding county college students majoring in a STEM-related field with a \$1,500 scholarship. Scholars also attend a luncheon with an R&D professional panel and are given a tour of a NJ R&D facility.
<u>Rutgers University's Scholars Training and Enrichment Program (STEP)</u>	High School Graduates	The Scholars Training and Enrichment Program (STEP) assists high school graduates from Newark and other urban areas who will matriculate to the Newark campus of Rutgers Business School. The purpose of STEP is to enhance these high school graduates' success toward getting an RBS undergraduate degree. The STEP Fellows spend six (6) weeks in this residential program on campus and attend a variety of non-credit pre-enrollment courses during the summer before they start their official undergraduate courses the following September.

STEM PROGRAM	MINORITY AND FEMALE STUDENTS	DESCRIPTION
<u>AT&T Labs Fellowship Program (ALFP)</u>	Women and Minority Students in Doctoral Studies	The AT&T Labs Fellowship Program (ALFP) offers three-year fellowships to outstanding under-represented minority and women students pursuing PhD studies in computing and communications-related fields.
<u>Change the Equation</u>	Women and Minority Students	Change the Equation is a non-profit, non-partisan CEO-led initiative to solve America's innovation problem. It answers the call of President Obama's Educate to Innovate Campaign to move the U.S. to the top of the pack in science and math education over the next decade. We aim to improve science, technology, engineering, and math (STEM) education for every child, with a particular focus on girls and students of color, who have long been underrepresented in STEM fields.
<u>Community House</u>	Minority Students in Princeton County	Community House is committed to closing the minority achievement gap in Princeton by providing programs that bolster early childhood literacy, promote the mastery of fundamental academic skills, and create early awareness of post-secondary opportunities for underserved minority youth. Through collaborative partnerships with the Princeton Regional Schools and other local agencies, Community House works to ensure that these students are able to realize their academic dreams.
<u>Alcatel-Lucent's Education Frontiers for Young Women and Youth in Under-Served Communities Program</u>	Grades 9-12 Targets Minorities and Females	The goal of "The Education Frontiers for Young Women and Youth in Under-Served Communities Program" is to increase the number of participants from underrepresented groups in the fields of science, technology, engineering and math. Applicants for this program are females of any ethnicity, or males of African American, Hispanic or Native American descent. In 2009, the program served nearly 200 students at over 25 participating schools, in New Jersey or New York City.
<u>Great Minds in STEM</u>	All Ages and Grades	Great Minds in STEM is a non-profit organization that focuses on STEM educational awareness programs for students from kindergarten to career. Great Minds in STEM™ provides resources for recognition and recruitment of Hispanics in STEM on a national level, connecting multi-areas of engineering and science arenas to the general population.

<u>Kean University's Project Adelante</u>	Grade 6-12, Latino Students	The mission of Project Adelante is to encourage at-risk Latino youngsters in grades 6-12 to graduate from high school and go on to Post Secondary education. Adelante achieves its goals and objectives through the teaching of the core academic course in math, science, ESL and technology as well as multicultural enrichment activities. These enrichment activities include parental involvement, assistance with career selection, college admissions and financial aid, field trips, college tours, individual and group counseling, exposure to positive role models among others.
<u>MentorNet</u>	Women and Minority Students	To further the progress of women and others underrepresented in scientific and technical fields through the use of dynamic, technology-supported mentoring network.
<u>ExxonMobil's National Action Council for Minorities in Engineering (NACME)</u>	Minority Students	NACME, founded more than 30 years ago, and supported by corporations, has the goal of leading the effort to increase the representation of minority men and women in engineering and related careers. Block grants for scholarships are awarded to universities that have a track record and a focus to increase the number of minority engineering graduates.
<u>National Society of Black Engineers - Programs, Competitions and Scholarships</u>	African American Engineering Students and Professionals	The National Society of Black Engineers is a non-profit association that is owned and managed by its members. The organization is dedicated to the academic and professional success of African-American engineering students and professionals.
<u>Princeton University's Materials Academy</u>	Grades 9-12	Princeton University Materials Academy (P.U.M.A.) is a program committed to improving the science education of under-represented high school students in Trenton, NJ and the surrounding districts. P.U.M.A. brings 30-50 high school students to the labs of the Princeton Center for Complex Materials (PCCM) for 2-3 weeks every summer to teach them about science and engineering. Students learn through hands-on, inquiry-based activities, labs modeled after actual experiments currently done by PCCMs researchers, and lectures by faculty members and lead teachers. Topics covered include nanotechnology, cancer research and materials science.
<u>Rutgers-New Brunswick University's Douglass Science Institute</u>	Female Students Entering 9 th Grade	The Douglass Science Institute (DSI) is a four-year summer residential program for young women entering 9th grade who want to explore a variety of areas including biology, chemistry, computer science, environmental and marine sciences, engineering, physics, and mathematics.
<u>New Jersey Institute of Technology's Women in Engineering & Technology (WEIT) Initiatives-FEMME Program</u>	Post-4th Grade - Post-8th Grade Females	The Women in Engineering and Technology Initiative-FEMME Program is a five-week program designed to provide post-fourth through post-eighth grade girls with opportunities to enhance their mathematics, science and technological academic achievement, develop problem-solving and critical thinking skills, and promote self-esteem and self-confidence.

<u>Young Science Achievers Program (YSAP)</u>	Grades 9-12 Targets Minorities and Females	The Young Science Achievers Program offers grants of up to \$500 per project for projects with two or more students in the project. A project submitted by one student is limited to a total funding of \$250. YSAP serves public and private high schools (grades 9 through 12) throughout the state of New Jersey and New York City and is open to all applicants but targets young women of any ethnicity and males of African American, Hispanic, or Native American descent.
---	---	---

STEM PROGRAM	STUDENTS (GENERAL)	DESCRIPTION
<u>Bayer School Scholarships</u>	Students	With the Bayer scholarships for school students, the foundation supports students who show special commitment. The scholarships enable the students to participate in selected summer camps and programs for school students in the natural sciences. To achieve this, the foundation works closely with accredited educational establishments in Europe, the Asia/Pacific region and America.
<u>Buehler Challenger and Science Center</u>	Students	Many children decide, during their elementary years, that they have no interest in science, math and technology. At the same time, there is a rapidly increasing need for chemists, biologists, physicists, technologists and engineers. The Buehler Challenger & Science Center is working to help close this gap by providing unique hands-on experiences that raise students' expectations of success, foster in them a long-term interest in science, math and technology, and motivate them to pursue careers in these fields.
<u>Caldwell College EOF Summer Program</u>	Students	The Caldwell EOF Summer Program is a five-week semi-residential academic program that offers students the opportunity to earn four college credits while living on campus and taking advantage of extensive academic support services. Its goal is to help the students become comfortable with the campus and familiar with the rigors of college-level coursework, both of which aim to strengthen skills and build self-esteem.
<u>Comcast Leaders and Achievers Scholarship Program</u>	Students	Comcast wants to motivate young people to achieve their potential, to be involved in their schools, and to be catalysts for positive change in their communities. The Comcast Leaders and Achievers Scholarship Program recognizes students who exemplify these ideals and who serve as models for their fellow students.
<u>How To Smile</u>	Students	SMILE is a national partnership among science and technology centers, museums, community-based organizations, and out-of-school educators. We are dedicated to making science, technology, engineering, and math (STEM) exciting and engaging for all learners. Their partner organizations are resource hubs for educational programs that involve people of all ages and backgrounds.
<u>The Liberty Science Center's Jennifer A Chalsty Center for Science Learning and Teaching</u>	Educators and students	The Jennifer A. Chalsty Center was created to offer educators and students exciting insights into cutting-edge science, and to provide educators with training opportunities, resources and ready-made classroom materials.

<u>Mercer County Community College Youth College/College Bound Program</u>	Students	<p>The Mission of Youth College programs is to encourage and assist people who are traditional under-represented in post-secondary education because of income, family educational background, disability, or other relevant federal, state, provincial or institutional criteria, in the preparation for entry to, and completion of post-secondary education. Upward Bound helps young students to prepare for higher education. Participants receive instruction in literature, composition, mathematics and science on Mercer County Community College Campus after school, on Saturdays and during the summer.</p>
<u>National Merit Lockheed Martin Academic Scholarship Program</u>	Students	<p>This National Merit Lockheed Martin Academic Scholarship Program is for sons and daughters of Lockheed Martin employees and stepchildren who primarily reside with a Lockheed Martin employee. National Merit Scholarship Corporation (NMSC), an independent, not-for-profit organization, conducts the annual competition. The program's purposes are 1) to identify and honor exceptionally able high school students and 2) to provide a system of services for corporations, foundations, and other organizations that wish to sponsor college undergraduate scholarships for outstanding students who interest them. All aspects of the selection of recipients and the administration of their awards are handled by NMSC.</p>
<u>Oracle Academy</u>	Students	<p>The Oracle Academy prepares students for information technology careers and provides teachers with world-class training and professional development opportunities by granting software, curriculum, and certification resources to high schools, vocational schools, colleges and universities.</p>
<u>Oracle Education Foundation</u>	Students	<p>The Foundation hopes to inspire students globally to think, connect, create and share through the use of technology to help them dissolve boundaries, fulfill their potential, and create a better society.</p>
<u>Princeton Plasma Physics Lab's PPPL Science Education Program</u>	Students and Teachers	<p>The program hopes to provide opportunities for students and teachers to engage in scientific inquiry in ways that enhance their understanding of science concepts and scientific ways of thinking.</p>
<u>Richard Stockton College EOF Summer Program</u>	Students	<p>The Educational Opportunity Fund Program is designed to meet the educational and financial needs of students whose potential for college may not be reflected in their academic grades and whose economic background makes it extremely difficult for them to pursue a college education without financial aid.</p>

<u>Rutgers-Newark University's Consortium for Pre-College Education in Greater Newark</u>	Students	<p>The Consortium for Pre-College Education in greater Newark is a collaboration among New Jersey Institute of Technology, Rutgers-Newark College of Arts and Sciences and the University of Medicine and Dentistry of New Jersey. The program is designed to incorporate State Core Curriculum Content Standards into courses to enhance students' academic skills in mathematics, science, language arts and history.</p>
<u>Bristol-Myers Squibb's RxeSEARCH: An Educational Journey</u>	Students	<p>Students follow the pharmaceutical drug development process through the five phases of research and development (R & D): discovery research, preclinical development, clinical development, regulatory affairs and commercialization. The class is hands-on with a college seminar format that promotes high-level discussions. Through reality-based case studies and exercises, students develop skills in problem solving, critical thinking, decision-making, resource management and teamwork.</p>
<u>Monmouth University's School of Science Summer Research Program</u>	Students	<p>The Monmouth University School of Science Summer Research Program is a 12-week research experience for students to work on collaborative research projects under the supervision of School of Science faculty and staff.</p>
<u>The Coalition for Science After School</u>	Students	<p>The Coalition is a strategic alliance of individuals and organizations from STEM education, youth development and programs held outside of school time. They wish to coordinate and mobilize community stakeholders to strengthen and expand opportunities that engage young people in science after school. The Coalition envisions a day when young people from all backgrounds have access to high-quality science, technology, engineering and mathematics learning beyond the classroom.</p>

Educator STEM Programming

STEM PROGRAM	EDUCATORS (ELEMENTARY)	DESCRIPTION
<u>New Jersey Institute of Technology's Education and Training Institute</u>	K-12 Educators	Under the sponsorship of the Center for Pre-College Programs (CPCP), the Education and Training Institute (ETI) provides K-12 educators with standards-based lesson plans, pre-engineering curriculum modules and professional development training in order to increase interest and the academic pool of pre-college students prepared to pursue careers in science, technology, engineering and mathematics (STEM).
<u>PSE&G's Environmental Education Grant Program</u>	K-9 Educators	PSE&G offers competitive grants of up to \$3,500 each for teachers of grades K-9
<u>Mickelson ExxonMobil Teachers Academy</u>	Open to educators - Grades 3-5	The weeklong Mickelson ExxonMobil Teachers Academy for grades 3–5 teachers is dedicated to increasing students' learning and appreciation of math and science.

STEM PROGRAM	EDUCATORS (MIDDLE SCHOOL)	DESCRIPTION
<u>New Jersey Institute of Technology's Education and Training Institute</u>	K-12 Educators	Under the sponsorship of the Center for Pre-College Programs (CPCP), the Education and Training Institute (ETI) provides K-12 educators with standards-based lesson plans, pre-engineering curriculum modules and professional development training in order to increase interest and the academic pool of pre-college students prepared to pursue careers in science, technology, engineering and mathematics (STEM).
<u>Roche's "New Choices, New Responsibilities: Ethical Issues in the Life Science" Program</u>	Secondary Educators	The "New Choices, New Responsibilities: Ethical Issues in the Life Sciences" Program is an education partnership which supports a curriculum supplement and training workshop on bioethics for secondary teachers.

STEM PROGRAM	EDUCATORS (HIGH SCHOOL)	DESCRIPTION
<u>New Jersey Institute of Technology's Education and Training Institute</u>	K-12 Educators	Under the sponsorship of the Center for Pre-College Programs (CPCP), the Education and Training Institute (ETI) provides K-12 educators with standards-based lesson plans, pre-engineering curriculum modules and professional development training in order to increase interest and the academic pool of pre-college students prepared to pursue careers in science, technology, engineering and mathematics (STEM).
<u>Research Experiences for Teachers (RET) at NJIT</u>	High School Educators Summer Program	A collaboration of The Engineering Research Center for Structured Organic Particulate Systems (ERC-SOPS) (http://www.ercforsops.org) and the Center for Pre-College Programs (CPCP) at NJIT, the National Science Foundation funded program will engage teams of high school teachers in a summer research program, where they will be a contributing part of a research group, as they acquire the skills and knowledge of research and the subject of pharmaceutical engineering that they can incorporate into their teaching practice.

<u>Roche's "New Choices, New Responsibilities: Ethical Issues in the Life Science" Program</u>	Secondary Educators	The “New Choices, New Responsibilities: Ethical Issues in the Life Sciences” Program is an education partnership which supports a curriculum supplement and training workshop on bioethics for secondary teachers.
--	---------------------	--

STEM PROGRAM	EDUCATORS (GENERAL)	DESCRIPTION
<u>Alternate Route Program</u>	Educator Preparation	The Alternate Route program is a non-traditional teacher preparation program designed for those individuals who have <i>not</i> completed a formal teacher preparation program at an accredited college or university, but wish to obtain the necessary training to become a NJ certified teacher.
<u>Bayer-National Science Teachers Association Fellows</u>	Educators	This is a professional development initiative created to help promote quality science teaching, enhance teacher confidence and classroom excellence, and improve teacher content knowledge.
<u>Liberty Science Center's Jennifer A. Chalsty Center for Science Learning and Teaching</u>	Educators and Students	The Jennifer A. Chalsty Center was created to offer educators and students exciting insights into cutting-edge science, and to provide educators with training opportunities, resources and ready-made classroom materials.
<u>New Jersey Association for Educational Technology</u>	Educators	This association works to promote the use of technology in education by helping serve a variety of educators including teachers, technology coordinators, administrators, consultants, computer companies, software vendors, and others.
<u>Oracle Academy</u>	Students	The Oracle Academy prepares students for information technology careers and provides teachers with world-class training and professional development opportunities by granting software, curriculum, and certification resources to high schools, vocational schools, colleges and universities.
<u>Partnership to Improve Student Achievement</u>	Teachers	An intensive, two-week summer institute involves teachers in collaborative learning through engagement in problem based learning (PBL), science inquiry, engineering design, foundational learning in core science topics, and the development of a teacher portfolio that uses the PBL framework.
<u>Princeton Plasma Physics Lab's PPPL Science Education Program</u>	Students and Teachers	The Program hopes to provide opportunities for students and teachers to engage in scientific inquiry in ways that enhance their understanding of science concepts and scientific ways of thinking.
<u>Sony Electronics Eye on Education Program</u>	Educators	Sony offers educational institutions competitive pricing, exceptional service, financing solutions and trade-in programs for Sony projectors and flat-panel displays. Through this progressive program, educators can visually enhance the learning experience.

<u>GlaxoSmithKline's Supporting Science Education Programs</u>	Educators	<p>The success of our business relies on us being able to recruit talented individuals, particularly those with science qualifications. We also want young people to make sound decisions about the science-related issues they come across in everyday life such as healthy eating, vaccinations and the value of medicines. Our education programs help make science more relevant to young people in the UK and US, stimulating their interest in science and encouraging them to pursue a science-related career. We also support the training and development of science teachers.</p>
<u>Liberty Science Center's Teacher Connections</u>	Educators	<p>Teacher Connection brings teachers, scientists, researchers, and experts in various scientific fields together to enhance teacher's science backgrounds, develop techniques and activities to enrich student's classroom science experiences and build resources for use in the classroom.</p>
<u>Liberty Science Center's Teacher Impact Workshops</u>	Educators	<p>Teacher Impact Workshops help teachers develop real-world, inquiry-based projects for the classroom.</p>

General STEM Programming

STEM PROGRAM	GENERAL PROGRAMS	DESCRIPTION
<u>Alternate Route Program</u>	Teacher Preparation	The Alternate Route program is a non-traditional teacher preparation program designed for those individuals who HAVE NOT completed a formal teacher preparation program at an accredited college or university, but wish to obtain the necessary training to become a NJ certified teacher.
<u>21st Century Community Learning Centers Program</u>	General Program	The 21st Century Community Learning Center is a federally funded program supported by the New Jersey Department of Education for out-of-school time programs in New Jersey, which include before school, after school or summer.
<u>Rutgers' Academy for Collaboration at a Distance (ACAD)</u>	General Program	The mission of ACAD is to enhance learning and teaching through collaborations. Collaborative tools introduced in this institute are free to ACAD participants. Each participant/team will receive a webcam to facilitate desktop videoconferencing. Special events during the school year will be open to ACAD participants at free or greatly reduced cost.
<u>Advancing Science through Pfizer Investigator Research Exchange (ASPIRE)</u>	Young scientists	Pfizer supports the career development of promising young scientists in basic science, translational and clinical research through a competitive grants program that advances medical knowledge in the pathogenesis and treatment of selected diseases.
<u>GlaxoSmithKline's America's Promise Alliance</u>	General program	America's Promise Alliance is committed to leading a national movement with the goal that every child will graduate from high school ready for college, work and life. With a national dropout rate greater than 30% and a 50% rate for many minorities, GSK recognizes the need for a unified effort of all stakeholders, all of who will depend on a qualified workforce for the long-term success of their organizations. Dropout Prevention Summits being held across the U.S. will help identify strategies, provide workable solutions and promote improved high school graduation outcomes. GSK supports the Grad Nation Technical Assistance program, which is part of the Alliance's Dropout Prevention Initiative.
<u>AT&T Aspire</u>	General Program	In 2008, a \$100 million philanthropic program, AT&T Aspire was launched. It is designed to focus on the high school dropout crisis. It's the biggest and most significant investment in education in the company's history, placing emphasis on educating future workers for a rapidly changing and always connected global marketplace.
<u>Breakthrough Generation</u>	General Program	Breakthrough Generation seeks to foster the development of a new generation of leaders capable of fully grappling with the scale and complexity of today's greatest challenges, and offering cutting-edge short- and long-term solutions.

<u>Cable in the Classroom</u>	General Program	Cable in the Classroom (CIC), the cable industry's education foundation, works to expand and enhance learning opportunities for children and youth. Since 1989, CIC has worked with the cable industry to provide schools, teachers, and families with resources access to cable and high-speed Internet, programming and online content, and more. With easy access to educationally rich content through new technologies, educators can engage students through interactive experiences and enhance the learning experience.
<u>Caldwell College EOF Summer Program</u>	Summer High School Students	The Caldwell EOF Summer Program is a five-week semi-residential academic program that offers students the opportunity to earn four college credits while living on campus and taking advantage of extensive academic support services. Its goal is to help the students become comfortable with the campus and familiar with the rigors of college-level coursework, both of which aim to strengthen skills and build self-esteem.
<u>Campbell's Labels for Education</u>	General Program	For more than 37 years, Labels for Education has been awarding free educational equipment to schools in exchange for proofs of purchase from the Campbell family of brands. It's a fun, easy program where students, families and members of the community work together for a common goal.
<u>Career and Technical Education Partnership (CTEP) Grant</u>	General Program	Funded by the New Jersey Department of Education, its mission is to provide the proper teaching and learning opportunities to enhance career and technical education in the following seven Career Clusters: Architecture & Construction; Arts, A/V Technology & Communications; Government & Public Administration; Hospitality & Tourism; Law, Public Safety, Corrections & Security; Manufacturing; and Transportation, Distribution & Logistics.
<u>CELGENE Medical Educational Grants</u>	General Program	Medical Educational Grants are awarded in support of high quality, independent educational programs and materials, which demonstrate the potential to improve patient care and health outcomes.
<u>Stevens' Center for Innovation in Engineering & Science Education (CIESE)</u>	General Program	Since 1988, CIESE has received more than \$30 million in grants, contracts, and awards from the U.S. Department of Education, the NJ Department of Education and Commission on Higher Education, the National Science Foundation, and a range of other public agencies, corporate and private foundations, and school district sources to implement curriculum development, teacher professional development, and research programs.
<u>Fairleigh Dickinson University's Urban Pre-College Program</u>	General Program	The Urban Pre-College Program (UPP) is a three-week residential experience that combines a leadership retreat with academic courses in the humanities and a self-development component to develop self-esteem, risk-taking, and overcoming a fear of failure.

<u>Liberty Science Center's Former Abbott Partnership Program</u>	At-risk School Districts	Families from NJ's at-risk school districts are invited to explore the Science Center's themed exhibition galleries, experience the excitement of IMAX films and 3D shows, and engages in special family programming, live demonstrations and hands-on activities all at no cost.
<u>GE's Developing Futures in Education Program</u>	General Program	School districts use their grants to develop a rigorous, system-wide math and science curriculum and provide comprehensive professional development for their teachers. Through more hands-on instruction, students learn from teachers and GE Volunteers as they work together on special mathematics and science projects involving real-world challenges
<u>HP Catalyst Initiative</u>	General Program	HP is building a global network of consortia that is developing more effective approaches to STEM education. The goal is to transform STEM learning and teaching, and to inspire students to use their technical and creative ingenuity to address urgent social challenges in their communities and around the world.
<u>HP EdTech Innovators Award</u>	Education Innovators	The EdTech Innovators Award is strategically designed to increase the capacity of education to take advantage of proven ideas and strategies by showcasing success, supporting continued innovation, and helping proven innovators take their ideas to the next level.
<u>HP Learning Initiative for Entrepreneurs (HP LIFE)</u>	Entrepreneurs and Small Business Owners	HP Learning Initiative for Entrepreneurs (HP LIFE) is a global training program that helps entrepreneurs and small business owners develop essential IT and business skills. Equipped with these skills, young people worldwide can create opportunities to transform their lives and the lives of others in their communities.
<u>New Jersey Institute of Technology's Institute for Implementation of Academic Standards</u>	General Program	This site provides information and training for school districts interested in classroom implementation of academic content standards. The information provided by this site, while centered on standards implementation in California, is applicable to the implementation of New Jersey's Core Curriculum Content standards because the procedures for instructional planning are essentially the same.
<u>Johnson and Johnson's Bridge to Employment (BTE) Program</u>	General Program	Johnson & Johnson established the Bridge to Employment program (BTE) to help young people build solid futures by introducing them to a broad array of careers in health care. The idea is to engage students through real world experiences to demonstrate that learning can be meaningful, engaging, and relevant to their future. By fostering long-term partnerships among businesses, educators, community-based organizations and parents, BTE helps prepare young people to meet the challenges and requirements of careers in the health care industry and in today's knowledge-rich society.

<u>ExxonMobil's Junior Achievement</u>	General Program	ExxonMobil provides grants to local, regional, national and international Junior Achievement organizations that educate and inspire young people to understand business and economics, while also preparing them to enter the workforce. In addition, trained ExxonMobil employee volunteers lead specific lesson plans at schools of their choice.
<u>Making Science Make Sense (MSMS) Program</u>	General Program	As a science- and research-based company with major businesses in health care, nutrition and innovative materials, Bayer Corporation has a strong stake in helping to improve science education and to insure that all individuals are scientifically literate. The MSMS Program seeks to advance science literacy across the United States through hands-on, inquiry-based science learning, employee volunteerism and public education.
<u>New Jersey Institute of Technology's Medical Robotics (MEDIBOTICS)</u>	General Program	The Medibotics program is a five-week program designed to provide post-8th grade students with an introduction to Medical Robotics. Students will learn, use, and apply robotics, and Information Technology concepts to medical problems through the programming and design of robots using LEGO NXT.
<u>Merck Institute for Science Education (MISE)</u>	General Program	Merck & Co., Inc. founded the Merck Institute for Science Education (MISE) in 1993 with the mandate to improve student performance and participation in science. The Company sought to wed children's curiosity and enthusiasm for learning with an investigative approach to science.
<u>National Engineers Week</u>	General Program	This week is a nationwide effort that reaches thousands of schools, businesses and community groups, promoting the importance of an engineering education and motivating youth to consider careers in the field.
<u>National Math and Science Initiative (NMSI)</u>	General Program	The National Math and Science Initiative (NMSI) was launched in 2007 by leaders in business, education, and science to reverse the recent decline in U.S. students' math and science educational achievement. NMSI's mission is to bring best practices in math and science education to the 50 million students in the American public school system. NMSI does this by replicating programs nationally that has a documented record of success.
<u>NEC Star Student Program</u>	General Program	The Star Student Program helps institutions acquire visual displays needed to share information, engage and move students to new levels of discovery. Not only does NEC enable schools with the best products for displaying technology, but NEC is also giving money back to the schools.

<u>New Jersey Academy of Science</u>	General Program	The New Jersey Academy of Science is a private, non-profit, scientific and educational organization of scientists and others interested in science. The purpose of the academy is to stimulate education and research in science throughout New Jersey all with the intent to encourage and nurture the scientists and science educators of tomorrow.
<u>New Jersey Statewide Systemic Initiative (NJSSI)</u>	General Program	The New Jersey Statewide Systemic Initiative (NJ SSI) is a unique partnership of schools, districts, colleges and universities, science centers and museums, business and industry dedicated to strengthening mathematics, science, and technology education for all students in New Jersey. Utilizing an infrastructure of regional centers and specialty sites, NJ SSI provides a variety of professional development programs, resources, technical assistance, and planning services to help districts implement standards-aligned, research-based curriculum programs in mathematics, science and technology education.
<u>NJ Technology Educators Association</u>	General Program	The mission of the New Jersey Technology Education Association is to foster the development of technological literacy through Technology Education programs in the state of New Jersey.
<u>NJEA Frederick L. Hipp Foundation for Excellence in Education</u>	School Employees	Established in 1993, the NJEA Frederick L. Hipp Foundation for Excellence in Education was created to provide opportunities for school employees to expand their visions of excellence in our classrooms and schools. More than \$1.35 million in grants for innovative educational projects that represent a bold, fresh approach by school employees has already been awarded.
<u>Novartis Institutes for Biomedical Research (NIBR)</u>	General Program	The Novartis Institutes for BioMedical Research (NIBR) is the global pharmaceutical research organization of Novartis. With approximately 5,000 scientists and physicians around the world, our research is focused on discovering innovative new drugs that will change the practice of medicine. We have an open and entrepreneurial culture, encouraging collaboration to make effective therapies.
<u>Oracle Commitment Grants</u>	General Program	These Commitment Grants include cash, expertise, and in-kind donations and are designed to make a meaningful impact globally in the areas of math, science, and technology education; environmental protection; and service to the global community.
<u>Progressive Science Initiative (PSI)</u>	General Program	The PSI is a comprehensive science program that addresses both curriculum and instruction which has a track record of improving Advanced Placement (AP) participation and success

<u>Rock Stars of Science</u>	General Program	With surveys showing that many people in the US are unable to name a single living scientists, GQ and the philanthropic Geoffrey Beene foundation hope that the Rock Stars of Science campaign will improve the image of science by profiling its stars. It features scientists being shown as, and with, rock stars, to make them look cool and hopefully get people interested in the researchers and the work they do.
<u>Rutgers-Newark's Saturday Academy</u>	General Program	The Academy provides an academic experience within a college setting. Between October and May, students are given opportunities to strengthen academic skills necessary for success in college.
<u>Sabinsa on Wheels</u>	Scientists and product development persons	This is free program is designed to be an informative and educational seminar on Nutraceutical and Cosmeceutical ingredients. It's for scientists, product development persons and anyone who would like more information on nature's finest ingredients.
<u>Sanofi-Aventis U.S. Educational Grants</u>	General Program	The purpose of an educational grant is to support an activity that encourages an educational interchange with respect to available scientific and medical information.
<u>Sprint Character Education Grant Programs</u>	General Program	Sprint remains committed to supporting young people across the country, and we look forward to providing programs that do just that in 2011. Over the past three years, the Sprint Character Education Program has provided more than \$1.5 million in Sprint Foundation grants to schools and districts nationwide, allowing them to offer creative and effective character-education curriculum.
<u>STEM2Stern</u>	General Program	By offering a broad range of STEM education and outreach programs, the Naval Service seeks to address the national crisis of decreasing college enrollments and careers in science and engineering. Through STEM2Stern, students, parents, teachers, and mentors can seek new programs and partnerships to strengthen STEM education.
<u>ExxonMobil's Sally Ride Science Academy</u>	General Program	The Sally Ride Science Academy by ExxonMobil is dedicated to helping teachers raise students' interest in science. It is based on research, which shows that introducing young students to diverse examples of science careers and scientists can ignite their interest and make the study of science more meaningful to them.
<u>Montclair State University's Traders to Teachers Program</u>	Adults	An accelerated three-month program that allows displaced financial services employees to obtain public school certification to teach mathematics. The N.J. Department of Labor will fund the cost of the program for participants.

<u>Union County College Yes We Can College Bound Program</u>	General Program	The YWC College Bound Program is a collaborative program between Elizabeth H.S. and Union County College, funded by the NJ Commission on Higher Education, to assist student with their preparation for college. EHS and Union County College work together in an effort to strengthen students' academic skills and increase their chances for high school graduation and entrance into college.
<u>Montclair State University's Center for Science Teaching and Learning</u>	General Program	Located at Rider University and Montclair State University in New Jersey, and in development at Quinnipiac University in Connecticut, these centers are dedicated to improving science education at the elementary and high school levels.
<u>Verizon's K-20 Videoconferencing Project</u>	General Program	The VK20 Initiative provides resources and support for the K20 community as well as content providers to enhance the effective use of videoconferencing. K20 partners include the Garden State Distance Learning Consortium (GSDLC), NJEDge.Net, Rutgers University Center for Mathematics, Science and Computer Education and Verizon. Through video conferencing, teachers and students gain access to resources beyond the four walls of their classrooms.