CONFERENCE THEME & LOCATION

STEP Conference 2008

10th Annual STEP Statewide Student Conference

CONFERENCE THEME

"STEP: Moving from Excellence to Eminence"

CONFERENCE DATES & LOCATION

March 28—30, 2008

Albany Marriott Hotel ~ Albany, New York

STATEWIDE CONFERENCE PLANNING COMMITTEE

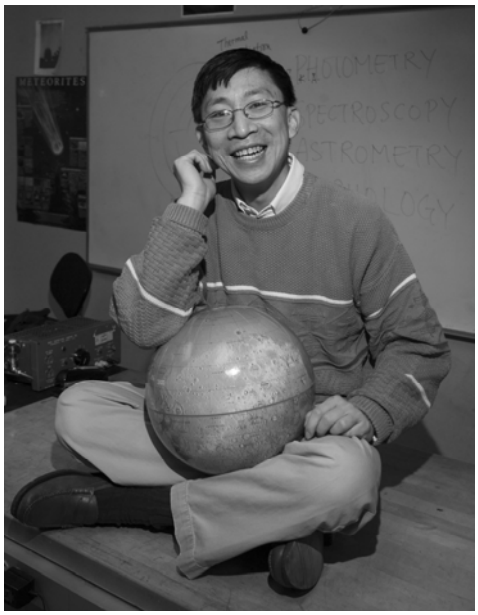
STEP Conference 2008

STATEWIDE CONFERENCE PLANNING COMMITTEE

Donna Augustine	Monroe Community College
Etwin Bowman	SUNY Albany
Oswaldo Cabrera	Long Island University
Monyuette Coplin	SUNY Buffalo Biomedical Program
Christie-Belle Garcia	Fordham University
Debra Evans-Greene	College of Staten Island
Barbara Jones Jones	Mercy College
Rani Lorenz	LeMoyne College
Cecelia Russo	St. John's University
Mary Stickney	SUNY Potsdam
Dr. Gretchel H. Tyson	Union College
Dr. Leonese Nelson	Syracuse University—Conference Chair

Welcome Address

STEP Conference 2008



Dr. Charles Liu

Dr. Charles Liu is a Professor of Astrophysics at the City University of New York's College of Staten Island. He is also an Associate with the Hayden Planetarium at the American Museum of Natural History in the Department of Astrophysics. His research focuses on colliding galaxies, quasars, and star formation history of the universe. He earned his Bachelor's Degree from Harvard University, and Doctorate from the University of Arizona; he completed his postdoctoral research at Kitt Peak National Observatory, and Columbia University.

Dr. Liu is among a select group of international experts studying data colleted by the National Aeronautics and Space Administration's (NASA) Hubble Space Telescope. Along with academic journals, he writes the astronomy column, "***Out There,***" for Natural History Magazine. Together with co-authors Robert Irion and Neil Tyson, he received the 2001 American Institute of Physics Science Writing Award for his book, ***One Universe: At Home In The Cosmos***. He and his wife, Amy, have three children.

KEYNOTE ADDRESS

STEP Conference 2008

Dominic Carter

Veteran newsman Dominic Carter has been described as the best political reporter working in New York television today. A fixture at NY1 News since the news channel launched in 1992, Carter has released a book on his life entitled ***No Momma's Boy***, a book that chronicles his triumphant struggle to overcome his mother's mental illness while growing up in a Bronx Housing Project.

As the host of NY1's nightly political show "Inside City Hall," Carter has handled some of the station's most challenging assignments, and has interviewed every major political player in the state, as well as many national and international leaders. Throughout this year's presidential primaries, Dominic has appeared on the nationally syndicated television show *Hardball with Chris Matthews*, and CNN.

In 2006, he received widespread acclaim for his role as the moderator of a series of state-wide debates for governor, U.S. Senator, and state attorney general. During the first debate with Senator Hillary Clinton, he made international headlines when Clinton said for the first time that she was considering running for the presidency of the United States.

His repertoire of exclusive interviews includes former President Bill Clinton and South African President Nelson Mandela. Carter has appeared on the cover of *The New York Times TV Guide*, which called the veteran journalist "a force to be reckoned with." He has also been profiled in *The Washington Post*, *The New York Post*, and *New York Magazine*, among others.

Carter received a Bachelor's Degree in journalism from the State University of New York at Cortland, and attended graduate school at Syracuse University's *S.I. Newhouse School of Public Communications* before starting his career in radio.

In his free time he often speaks to youth groups about the importance of education and achievement. He has received the Samuel P. Peabody Award from the Citizens' Committee for Children for his vision, innovation, and dedication to children and families.

STUDENT RESEARCH POSTER COMPETITION WINNERS

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BIOLOGICAL/LIFE SCIENCES — MIDDLE/JUNIOR DIVISON—(Grades: 7—10)

Place	Presenter(s) Names	Poster Title	Abstract	Institution
1st	Jonathan Ellis Robert Akinsanmi	*The Effects of Over-the Counter Medicines on Plants*	This experiment relates to a popular societal practice of using over-the-counter medicines to cure ailments. Some individuals seek pain relief, while others attempt to eliminate the symptoms of ailments that have no cure. The common cold, for example, does not have a cure, but the many available over-the-counter (OTC) medications effectively target symptoms of the ailment such as runny nose, congestion, and cough. Some use "easy to acquire" OTC medications as recreational drugs, and this incorrect usage may lead to multiple health issues. If misused or abused, these drugs may create health hazards that lead to years of ill health; under usage serves no remedial purpose. This project will test the safety and effectiveness of OTC medicines.	College of Staten Island
2nd	Jordan Boucicaut	*The Effects of Different Concentrations of the Plant Growth Substance IAA and Gibberellic Acid on the Growth of Roots and Shoots of Different Legumes*	Plant Growth Substances (PGS) such as Indole-3-acidic Acid (IAA) and Gibberellic Acid (GA) are naturally occurring plant hormones that can be extracted and fed to plants through aqueous solutions, which will yield different results. This study compares the affects of IAA and GA on different legumes. These hormones affect certain plant traits such as height, root, and the bending of the plant to a light source. Studying these chemicals and their affects on plants will provide insight into substances that can assist in seed germination and crop yield. Various concentrations of each PGS was mixed and given to each plant in different pots. Daily quantitative data was recorded for 30 days. Graphs of the various data indicate changes in the plant height, speed/rate of growth, mass, etc. As part of our findings, PGS affect plant behavior.	Hofstra University

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BIOLOGICAL/LIFE SCIENCES — MIDDLE/JUNIOR DIVISON—(Grades: 7—10)—Continued

Place	Presenter(s) Names	Poster Title	Abstract	Institution
3rd	Faith Page Chris Hewlett Brooke Percy	*An Investigation of Floor Characteristics and Exposure Time on Bacterial Transfer, or is the Five-second Rule Accurate????*	Young children often pick up food off of floors and put it into their mouths. Many people jokingly refer to the "five-second rule" as a measure of safe exposure time after food falls onto the floor. This rule implies that there has not been enough contact time with the floor surface to transfer bacteria that could be harmful to humans. There is increasing concern about the many forms of bacteria that are resistant to antibiotics. Contact with these strains could result in illnesses that are not easily treated. Does the type of floor affect the potential amount of bacterial contamination of foods that come in contact with it? We hypothesized that rough, porous floors, or carpets would transfer more bacteria than smooth, non-porous floors. If food comes in contact with a rough, porous surface, it will pick up more bacterial contamination than a floor with a smooth, non-porous surface during comparable time of exposure. Ten flooring surface samples ranging from porcelain to thick pile carpet were cleaned, disinfected, and exposed to air-borne bacteria in the same location for six days. These surfaces were not exposed to any foot traffic. Three 1 cm^2 blocks of nutrient agar represented the 'food' and were randomly placed on the floor sample for five seconds then removed to a sterile Petri dish and incubated at 37° C for 24 hours. The process was repeated for a 30 second, 60 second, 120 second, and 300 second exposure for each type of flooring. After incubation, the agar blocks were examined for bacterial colonies and the three counts were averaged.	Clarkson University

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			Results showed that few bacteria were transferred to the nutrient agar during the 5 second and 30 second exposure times. More bacteria were transferred during the 300 second exposure. Porous and rough surfaces, including thick pile carpet, rough stone, and coarse limestone tiles transferred more bacteria than smoother tile samples like ceramic, clay, and porcelain. Both the exposure time and the type of floor surface have an affect on the transfer of bacteria to foods and on our belief in the five-second rule.	

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BIOLOGICAL/LIFE SCIENCES — SENIOR DIVISON—(Grades: 11—12)

Place	Presenter(s) Names	Poster Title	Abstract	Institution
1st	Fabian Ortega	*Progeria Syndrome – A Study of Intracellular Distribution of Progerin*	Hutchinson-Gilford Progeria Syndrome (HGPS) is a premature aging disease commonly called Progeria Syndrome. Children affected with this disorder show loss of subcutaneous fat, are of short stature and a small face, possess dystrophic nails, and have many defects commonly found in elderly individuals such as arthritis and atherosclerosis. Since 2003, HGPS disorder has been linked to mutation in the LMNA gene that encodes two major products lamin A and lamin C. Lamin A and C are components of nuclear lamina, a protein meshwork that plays an important role in maintaining the integrity of the nuclear architecture and several nuclear functions. Nearly 90% of patients with HGPS harbor the mutation LMNA G608G. LMNA G608G mutation creates a new splicing site within Exon 11 of LMNA, and elicits the production of a truncated lamin A product, missing 50 amino acid residues at the carboxyl-terminal domain of wild type lamin A protein. This mutation protein is a denoted progerin. This study set up a cellular model to follow the intracellular distribution of progerin, and to define how progerin affects the nuclear compartment. For this purpose, three plasmids encoding either the wild-type lamin A, progerin, or progerin missing the NLS sequence, were used to transfect human dermal fibroblast cultures.	Farmingdale State College

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BIOLOGICAL/LIFE SCIENCES — SENIOR DIVISON—(Grades: 11—12)—Continued

Place	Presenter(s) Names	Poster Title	Abstract	Institution
2nd	Mark Araujo	*IgG4 Hinge Mutational Analysis*	This study compares the stability of immunoglobulins (antibodies) of the IgG1 and the IgG4 subtypes. IgG is the predominant antibody in human serum, and human IgG4 is the least abundant subclass. The amino acid sequences of the hinge regions of the IgG1 and IgG4 antibody subtypes differ in that the hinge region of IgG4 contains the sequence Cys-Pro-Ser-Cys, while IgG1 contains the sequence Cys-Pro-Pro-Cys. Sequence variation in the hinge regions may be associated with an IgG4 antibody subtype having an interchain disulfide bonding pattern different from other IgG subclasses, such as IgG1. Experiments were performed to determine whether amino acid changes in the hinge region would yield an IgG4 molecule with greater stability (perhaps due to improved interchain disulfide bonding). **Implications for the future:** Antibodies having stabilized hinge regions may offer the potential for therapeutics with improved overall pharmacokinetics.	New York Medical College
3rd	Yubelka Hernandez Asav Vora	*The Hazards of Double Dipping*	"Double-dipping" is a technique by which a person places an already bitten food item into a dip. A study performed at Clemson University (CU) by Professor Paul Dawson was the inspiration for this experiment. The CU experiment determined that three to six "double-dips" transferred approximately 10,000 bacteria from the mouth of the eater, into the dip. The purpose of this experiment is to confirm that a significant transfer of bacteria occurs through "double-dipping." The experiment was taken a step further by determining the types of bacteria transferred, and the potential for serious health risks. Three dip tests were conducted using cheese, salsa, a combination of salsa and cheese, and ketchup. The experiment also analyzed samples of bacteria under a	Mount Sinai School of Medicine

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			microscope and identified the types of bacteria. Our results concluded that a significant amount of bacteria was present, and this can be important because this process can spread disease.	

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BIOLOGICAL/LIFE SCIENCES — MIDDLE/JUNIOR DIVISON—(Grades: 7—10)

Place	Presenter(s) Names	Poster Title	Abstract	Institution
1st	Breanna Ford Stanley Laurent Roniesia Godfrey	*Bottled Water: Is it Worth it? A Comparison of pH Levels of Various Types of Bottled Water and Tap Water*	Body fluids are slightly alkaline, ranging from a pH of 7.35 to 7.45, (Kozier, p.1432). Humans generally ingest acidic substances that can lead to increased oxidation of body tissues. It is important that we balance our intake with less acidic fluids. Recent research has focused on bottled water, addressing the lack of fluoride and potentially harmful chemicals from plastic (Jemmott, 2008). This project sought to answer whether there are differences in the pH levels of bottled water and tap water. The hypothesis is that tap water is more alkaline than bottled water. Samples of tap water and various types of bottled water were tested by pouring similar quantities into plastic containers. An indicator solution was used to determine the pH of each sample. Each sample was tested with a pH meter. There were differences in the pH values obtained with the two methods used. Our results showed that tap water pH was about 7.2, whereas several bottled water samples tested were more acidic. This study provides evidence that tap water may be more beneficial than bottled water in maintaining the body's normal pH levels.	Queensborough Community College
2nd	Azeezat Azeez	*Autism*	Autism is a neurological disorder that effects the social and behavioral interactions of a person. Also known as PPD (Pervasive Developmental Disorder), autism symptoms can range from "classical" (effects 1/1000 children), to a milder form (effects 1/300 children). Autism is rapidly increasing; about 1.5 million Americans have autism. Of all autistic cases, 80% are males. There is no known cure or cause for autism, but if diagnosed early, educational and therapeutic interventions can improve symptoms.	Bronx Community College

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HUMAN SERVICES — SENIOR DIVISON—(Grades: 11—12)

Place	Presenter(s) Names	Poster Title	Abstract	Institution
1st	Charles Lamar	*Quantitative Analysis of Mercury Excreted in Head Hair as an Indicator of Autism Spectrum Disorder*	Questions addressed by this study include: Is cold vapor atomic absorption capable of quantitatively measuring the level of mercury excreted in head hair? Can this data be used in the diagnosis of Autism Spectrum Disorder? Do the values of excreted mercury in autistic subjects correlate to their placement within the autism spectrum as defined by the Childhood Autism Rating Scale (CARS)? Hair samples were obtained from control and autistic individuals. Samples were acid extracted and analyzed using a Perkin Elmer cold vapor atomic spectrometer. It was determined, through the repeated analysis (n=20) of a control hair sample (mean = .719 μg Hg/g of hair, Std. dev. = .092), that mercury excreted in head hair can be quantitatively measured by this procedure. There was a significantly higher amount of mercury present in control samples, as compared to the autistic samples. These results support the theory that autistic individuals are unable to excrete mercury as effectively as non-autistic individuals. Currently, participants are being evaluated using a modified version of CARS, to test the possible correlation of mercury excretion and placement of autistic subjects.	SUNY Old Westbury

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HUMAN SERVICES — SENIOR DIVISON—(Grades: 11—12)—Continued

Place	Presenter(s) Names	Poster Title	Abstract	Institution
2nd	Katiana Pierre-Paul	*Teens are Unaware of Sexually Transmitted Diseases*	There are an estimated nine million new cases of sexually transmitted diseases/sexually transmitted infections (STD/STI) infecting adolescents each year. Unfortunately, many young adults are not being given enough educational information to protect or prevent themselves from being infected. This project uses data from an adolescent knowledge survey conducted throughout a New York City high school and neighborhood. This survey sought to find out how well young adults are educated on preventing the transmission of STD's/STI's, truths and myths about HIV/AIDS, and how frequently they use condoms. It is hypothesized that adolescents who are better informed of the truths and myths of these diseases and transmission prevention, are at a lower risk of contracting these diseases. Five hundred surveys were given out; 250 were given to females, and 250 were given to males. Survey data was used to draw conclusions.	Kingsborough Community College
3rd	Adam Sammons Sebastian Placide Shannon Zayas-Sanchez	*Asthma in Adolescents*	Asthma is a rising epidemic in the United States (US) that that has become exceeding prevalent in the New York City area. Almost 8.9 million children in the US have been diagnosed with asthma. Asthma was found to be common in low income housing communities and among economical deprived areas across the US. In New York City, various communities such as East Harlem and the South Bronx have the highest rates of asthma among children due to housing in poor condition and air pollution in these areas. A survey was developed to assess asthma in low income New York City communities that are believed to be prone to asthma. Some key findings were in line with known asthma	New York University School of Medicine

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			causing elements (i.e., the abundance of truck traffic, people living near highways, and the conditions of low income housing.) Through research we have developed a program designed to inform the public about asthma. Our goal is to raise awareness about asthma among children and adults in these communities.	

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PHYSICAL SCIENCES — MIDDLE/JUNIOR DIVISON—(Grades: 7—10)

Place	Presenter(s) Names	Poster Title	Abstract	Institution
1st	Alex J. McManus Pernelle Guerrier	*Heavy Metal Contamination: A Novel Approach to Agricultural Phytoremediation*	Arsenic is a slightly metallic, poisonous substance. Impoverished and underdeveloped countries, and some areas of the United States, have soils and other resources containing high concentrations of arsenic that are harmful. Access to a safe water supply is one of the most important determinants of health and socioeconomic development (Cvjetanovic 1986). The Pteris cretica fern, Diatomaceous Earth (DE), and Activated Charcoal (AC) were laboratory tested over a two week period for the ability of each to filter arsenic from drinking water. The materials were placed inside of filters built with 4-inch diameter PVC pipes that were secured with 2mm holed fiberglass mesh, according to assigned variables. All three filtering agents were placed to filter .1 mg/L of arsenic from an arsenic water solution; all three agents were placed to perform both individually and collectively. The variables placed in the 4 inch diameter filter filtered a larger amount of arsenic from the water; however, the smaller 1½-inch diameter filter, and 1½-inch diameter double mesh layer filter retained more water than its larger counterpart	SUNY Old Westbury
2nd	Arhea Marshall	*Homemade Hydrogenerators!!!!! – An Efficient Way to Power Homes*	Hydropower is an alternative source of energy, and it reduces the need for mechanical energy sources. Energy sources we used today, such as fossil fuels, have not been harvested to full potential. To test the efficiency of hydropower with less electrical energy, a design for a low scale hydropower generator was assembled. A generator needs as little as two gallons of water and a two foot drop to generate an electrical flow. This energy can be utilized as far up to a mile from its generator.	Medgar Evers College

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			This project developed a simple gallon-bottle base design for the main part of the generator; this was designed to function in a small-scale setting—like under a kitchen sink. Hydrodynamics, or the movement of water on various levels in the structure, will 'fuel' the output of the energy. This research and experimentation will prove that hydropower is an efficient alternative energy source by: (a) demonstrating its ability to be applied in designing residential structures; (b) showing that the operation of this generator is simple; and (c) helping to reduce the future impacts of human-induced climate change.	
3rd	Joshua Henry	*A Simple Laser Microphone for Classroom Use*	This paper will discuss the modern day method of eavesdropping using the modulation of laser light reflected from a window pane. The radio produces sound on the outside of the window, which causes vibration in the window glass. The vibrations in the glass pane cause the window to flex, changing the center of curvature of the window, thereby causing the focal length of the window to change (albeit very slightly). This creates a varying divergence in the reflected laser beam. The variations in the energy density correspond to the original audio information coming from the radio. As a result, even small vibrations cause a measurable variation in the energy density of the light reaching the solar cell. The variation in energy density at the solar cell causes the voltage across the cell to fluctuate. The solar cell receives the audio information carried by the modulated light energy density and transforms it into a fluctuating voltage. This voltage signal carries the original audio information, and it is sent to an amplifier where it is amplified to a level that can drive the speaker. The reproduced sound is clearly recognizable as one being produced by the portable stereo system.	Hofstra University

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PHYSICAL SCIENCES — SENIOR DIVISON—(Grades: 11—12)

Place	Presenter(s) Names	Poster Title	Abstract	Institution
1st	Shanté White	*"Up, Turn, And Release!" Determining Optimal Conditions to Maximize Distance a Shot Put is Thrown*	The shot put event in the sport of track and field has evolved with the maturing of Olympic Games. The shot put is a combination of constant horizontal motion and downward vertical acceleration. In physics the shot put has many practical applications. From the time the thrower begins moving, to the time the shot hits the ground, physics can be applied. This study seeks to compare how a non-experienced, and experienced, thrower can maximize the distance of their throws. Data was collected using three different throwing techniques. Analysis of data consisted of measuring throwing angles, different speeds at which the shot put is thrown, distance, and trajectory. This project is filling a practical gap in understanding the connection between throwing the shot put and physics, with desires of assisting athletes with improving performance. It is hypothesized that the angle, speed, and technique used to throw the shot put are the most significant factors in determining how one can maximize the distance at which a shot put is thrown. It is further hypothesized that optimal distance will occur when the athlete uses the spinning technique for throwing, and throws the shot at high velocity at, or near, a 45° angle.	Le Moyne College

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PHYSICAL SCIENCES — SENIOR DIVISON—(Grades: 11—12)—Continued

Place	Presenter(s) Names	Poster Title	Abstract	Institution
2nd	Akil Joseph	*Aerosols in Jupiter's Poles*	Jupiter's North Pole has a dark spot that was first seen by the Hubble Space Telescope in September 1997, and again by the Cassini space craft on its way to Saturn in 2000. This research will look at Jupiter to obtain clues about the composition of aerosols in the North Polar Region; it is believed that aerosols created the dark spot. Aerosols are either solid or liquid particles suspended in gases produced by man (Anthropogenic), or through natural processes. An example of a man made aerosol is the burning of fossil fuels that produce smoke in our atmosphere. Examples of natural aerosols are dust storms or ashes from volcanic eruptions. Jupiter has its own heating system in its core, and it has a similar chemical make up to the Sun. Knowing certain characteristic about Jupiter enables more learning about the sun and the creation of the solar system. Jupiter is an interesting planet with a large magnetic field that produces an aurora that is believed to be responsible for the creation of the aerosols on Jupiter.	Medgar Evers College

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SOCIAL SCIENCES (Grades: 7—12)

Place	Presenter(s) Names	Poster Title	Abstract	Institution
1st	Gladys Palaguachi	*Educating Adolescents on Sexual Violence*	One health issue being addressed in minority communities throughout New York City is the level of education on topics relating to sexual abuse and rape. This study believes that adolescents who are provided with a thorough education on what constitutes sexual abuse, ways to prevent it, and ways to respond in such situations, will help decrease the high rates of unwanted sexual contact. After collecting data from multiple surveys, we observed that there is a significant difference in adolescent understanding of sexual assault and rape between participants who knew rape victims, and those who did not. Typically, it was found that those who were closely linked to rape victims had different opinions about the subject than those with no connections. Current publications were used to develop a survey, and these surveys were distributed to adolescents in New York City to asses the current understandings of sexual abuse and rape. To solve this problem, a program that thoroughly educates minorities about rape and sexual abuse was proposed. The program will implement a curriculum that educates students on facts relating to sexual abuse and rape, and provide them with ways to protect themselves. The program will be sponsored by a yearly walk to prevent sexual assault and rape.	New York University School of Medicine
2nd	Charlene Minaya	*Communication Eradication*	In today's society technology is considered the predominant means of communication. Is society losing valuable social skills? What effect does this communication have on our speaking abilities, writing skills, and futures? Has this communication eradication been happening gradually over the past years, or has it just begun? Can losses be reversed or	New York University

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			replaced? If not, what are the implications for the future direction of the world? This study hypothesizes that humans are gradually losing social skills, thus having negative effects on our futures. **Methods/Procedures:** Surveys of varied racial, gender, and age groups will be conducted. **Results/Findings:** This study seeks to ascertain whether ignorance is, in part, responsible for the limited use of social skills. If yes, is knowledge all that is necessary to reverse this decline, or will social skills be forever lost? **Conclusion/Implications:** Results will determine whether or not a course of action must be taken to regain valuable social skills.	

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TECHNOLOGY (Grades: 7—12)

Place	Presenter(s) Names	Poster Title	Abstract	Institution
1st	Travon Jackson Christopher Lamson-Marrero	*Compressed Air: The Best Fuel You've Never Heard Of!*	What form of alternative fuels for automobiles is the most practical solution to the problem of fuel economy? Current fueling methods are showing harsh effects on our global environment. Emissions standards and constant surges in gas prices have negatively impacted the environment and consumers. From the use of websites like Aircar.com and Epa.org, questions were formed on relevant information for our topic. Fuel costs and efficiency were compared to strengthen data. Some companies have released prototypes of air cars. Air cars are popular in foreign countries, with some countries ordering thousands of cars. We initially believed that air as fuel would be unheard of, but it flourishes as a practical idea. We learned that air as fuel is efficient and inexpensive. Statistics and facts suggest that air cars are the solution to a problem that has been difficult to answer.	Rensselaer Polytechnic Institute
2nd	Jabari Nichols	*Water Purification Systems Using Solar Energy*	Global warming has become a front and center political issue for communities all over the world. The Nobel Peace Prize, which was recently awarded to former United States Vice President Al Gore, is a testament to the dire consequences of climate change. Participation in the Farmingdale College Science & Technology Entry Program (STEP) has curbed my skepticism and sparked my inquiry into finding solutions to global warming. To that end, my science project aims to use solar energy to purify polluted water, or salt water. With the increase in global population, global warming, and a loss of fresh water, there will soon be no free water in the	Farmingdale State College

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			world. Major corporations that use water as the main resource for their manufactured products are quickly buying up water resources all over the world in order to control and corner the market. Water purification through the use of solar energy may be the solution to our future needs. My project involves the design of a solar water purification system that can produce fresh water using sea water or polluted water. Using this purification system, the production rate of the water purifier is measured, and mathematical calculations are performed to find the size of a water purifier that is able to produce enough water for one person, an entire family, or a town.	
3rd	Thomas Carter Leandra Carter	*Solar Power as an Alternative Fuel Source*	Can solar-powered cars replace the less-efficient cars of today? The cost of nonrenewable fuel is a global problem because increased numbers of people are starting to drive and rely on cars as a primary mode of transportation. Some individuals are concerned about the depletion of oil, and some are concerned about the costs to obtain oils. The steps used to complete this research include analyzing the cost of fuel, the cost of production, maintenance, efficiency of oil, and comparing this information to solar powered cars. A consumer survey was created based on opinions of alternative fuel sources. It was learned that solar energy can be less wasteful, safer to use, more beneficial for the environment, and does not contribute to global warming. Experimental solar powered model cars were used in the observation. In completing the research, we found that converting cars might be costly, but is worth it to create a healthier atmosphere.	Rensselaer Polytechnic Institute

CONFERENCE SCHEDULE

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Friday ~ March 28th

TIME	ACTIVITY	ROOM
3:30pm~8:00pm	Registration	Foyer A
	Welcome Reception "Building a Community of STEP Program Directors, Coordinators & Parents"	Albany/Colonie
4:00pm~5:30pm	**Student Networking/Team Building** "Spelling Academic Success" Annette Toms Girls Club, Cleveland County Family YMCA, Shelby, NC	Salon A
4:00pm~5:30pm	**Student Professional Development** "Do the Right Thing" Pamala L. Brown-Grinion Totally "You"-nique School of Charm & Ettiquette	Salon B
4:00pm~5:30pm	**College Preparation** "It's All About Me: The College Essay" Michell Tollinchi-Michael Barnard College	Salon C
4:00pm~5:30pm	**Pilates for the Brain** "Aerobics of the Learning Brain" Wayne T. Uter PI Resources	Schenectady/Troy
6:15pm~8:15pm	Buffet Dinner	Ballroom Salons
7:00pm ~ 7:30pm	**Welcome Address** Dr. Charles Liu	Ballroom Salons
7:45pm~8:30pm	Coffee House/Variety Show	Ballroom Salons
9:00pm~12:00am	Games & "Dancing the STEP Stars"	Albany/Colonie Schenectady/Troy
9:00pm~12:00am	Party	Empire Room
9:00pm~12:00am	APACS Reception	State Room

Saturday ~ March 29th

TIME	ACTIVITY	ROOM
7:30am~8:30am	Breakfast	Salons DEFGH
8:30am~8:45am	Plenary Session	Salons DEFGH
9:00am~10:30am	Registration	Board Room
9:00am~10:30am	Concurrent Workshop Sessions	Salons AB, Albany/Colonie, and Schenectady/Troy

CONFERENCE SCHEDULE

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Saturday ~ March 29th (continued)

TIME	ACTIVITY	ROOM
9:30am~11:00am	Poster Competition Judges Meeting	State Room
10:30am~12:00pm	**Professional Staff Development Workshop** "Sparking Innovation and Creativity"—Part I Pam Varkony – Skillpath Seminars	Salon C
10:45am~12:15pm	Concurrent Workshop Sessions	Salons AB, Albany/Colonie, and Schenectady/Troy
12:20pm~1:20pm	Buffet Lunch	Ballroom Salons
1:30pm~3:00pm	Concurrent Workshop Sessions	Salons AB, Albany/Colonie, and Schenectady/Troy
1:45pm~3:15pm	**Professional Staff Development Workshop** "Sparking Innovation and Creativity"—Part II Pam Varkony – Skillpath Seminars	Salon C
2:00pm~5:00pm	Student Research Poster Competition	Empire Room
2:00pm~5:00pm	College Fair	Foyers C and D
3:15pm~4:15pm	Concurrent Workshop Sessions	Salons AB and Albany/Colonie
6:30pm~8:30pm	**10th Anniversary Dinner** **Keynote Address** Dominic Carter	Ballroom Salons
9:00pm~12:30am	Games & "Dancing the STEP Stars"	Albany/Colonie Schenectady/Troy
9:00pm~12:30am	Party	Empire Room

Sunday ~ March 30th

TIME	ACTIVITY	ROOM
7:30am~8:30am	Breakfast	Ballroom Salons
8:30am~10:30am	Closing Plenary Session Awards Presentations Roll Call	Ballroom Salons
10:30am~11:30am	Check-Out	Hotel Lobby