2021 Accomplishments of Science and Arts Engagement New York

As 2021 comes to an end we can reflect on the accomplishments during the year and outline the opportunities for the year ahead. In many ways and in spite of the pandemic, 2021 has been a very productive year.

Background

In 2016, Science and Arts Engagement New York, Inc. (SAENY), a not for profit 501(c)(3) corporation, launched the Harlem Gallery of Science working in collaboration with the City College of New York (CCNY). The project goals are to increase the number of underrepresented Black and Latinx youth who are prepared for college and thus enable them to enter productive careers in the fields of science, technology, engineering, arts, and mathematics (STEAM).

The Harlem Gallery of Science is committed to bringing science and technology alive through programs of hands-on mind-on and interactive exhibitions based on popular everyday themes, such as basketball, music and digital games. The Gallery’s experiential learning programs are directed at underrepresented youth (ages 11-24) from Harlem, Upper Manhattan, and the South Bronx, providing access to interactive learning opportunities and pathways to STEAM educational and career pathways as well as integrating the development of their social/emotional skills.

The long-term goals of New York City’s public and private sectors are to extend “good-paying” job opportunities for over 100,000 low-income and Black, Latinx and Asian workers in New York City. To achieve these goals over the next 10 years requires a new and innovative approach to prepare youth in the City’s underrepresented communities with the skills and self-confidence necessary to fill these positions. Part of its strategy is to build an ecosystem by building collaborative relationships and partnerships with government agencies, other not-for-profit organizations and educational institutions to leverage their collective resources and talents to achieve the common goal of expanding educational opportunities and career possibilities for underrepresented youth.

Unlike other cultural institutions devoted to science and technology, the Gallery is unique in its focus on building positive programs and experiences for its target population. It is a success model designed to change the current paradigm that is frequently “a pathway to prison.” CCNY and SAENY/HGS are committed to changing Black and Brown youths’ trajectory to “a pathway to success”.

NYS Lt. Governor Brian Benjamin considers that “SAENY and this project [HGS] are essential to creating opportunities to address the underrepresentation of young men and women of color in the STEAM fields. The proposed museum would help create a pipeline of talented, trained young people to enter NYC’s growing life sciences and STEAM fields.”
There needs to be a long-term strategy that builds pathways starting in middle school. A student graduating from college and entering the job market 10 years from today is currently enrolled in a middle school’s 6th or 7th grades. Our investment must begin now so as to begin to see the products of this pipeline of talent 10 years from now.

SAENY/HGS have forged numerous collaborative relationships to extend and strengthen the Gallery’s reach to the target population. Lloyd Williams, President of the Greater Harlem Chamber of Commerce, and a strong supporter of the Gallery see the important role the Gallery can play: “The Harlem Gallery’s diverse offerings -- interactive science themed exhibits; mentoring programs; e-sports gaming competitions and science themed plays, performances, lectures and classes – are the kind of accessible and engaging programs that our youth need.”

SAENY President Stan Altman Appointed Member of CCNY Faculty

Stan Altman, President of SAENY, officially joined the City College faculty in fall 2021 having transferred his faculty position from Baruch College. He reports directly to City College’s President Vince Boudreau. His portfolio includes the integration of the Gallery and its new programs with the College. One of the Gallery’s programs in gaming technology (described below) is part of a larger effort to build pathways to City College through relationships and outreach projects the Gallery has developed with local schools, industry, and not-for-profit organizations.

Inclusion of SAENY and HGS within the future vision of CCNY

The expanded vision for the role of SAENY and the Harlem Gallery of Science are being included as an important part of the City College of New York outreach efforts. President Boudreau appeared as an advocate in a specially prepared [architectural video](#) illustrating what the development of space on 125th Street in Harlem, envisioned for the Gallery near the College, might look like. He commented on the Gallery and City College as he walked by the proposed information desk within the facility. The Gallery will strengthen the presence of CCNY (along with the Apollo and other cultural landmarks) as a positive force in the center of Harlem.

DUNK! The Science of Basketball Exhibit

A grant from the Harlem Community Development Corporation to show the **DUNK! Science of Basketball** at City College in April 2020 was used to create a virtual, on-line version of the exhibit when the show was cancelled due to COVID-19. On February 1st of 2021 the on-line version of the **DUNK! Science of Basketball Exhibit** was launched and included a tour of the Harlem Gallery of Sciences’ Hall of Fame celebrating the achievements and contributions of Black and Hispanic scientists, engineers, and artists.

Establishment of a New Program on Gaming Science and Technology

The Gallery initiated a study on gaming science and technology as a possible new academic pathway for the study and application of STEAM education and career pathways. CCNY contributed both money toward the gaming pathways study as well as the time of Dr. Susan
Perkins, Dean of the Science Division who co-chaired the effort. The study has led to plans for City College to expand its experiential learning opportunities and degree programs in game design in partnership with the NYC Mayor’s Office of Media and Entertainment, (MOME) Urban Arts Partnership (UAP) and SAENY/HGS. An important feature of the proposed program is UAP expanding its School of Interactive Arts (SIA) program in Harlem, Upper Manhattan, and the Bronx. SIA works with students attending Title I high schools using digital game design to prepare students for college pathways in the STEAM fields. Final arrangements are being made to start the program January 1, 2022.

In the summer of 2021, CCNY asked SAENY to mount a presentation around gaming during Harlem Week 2021. Organized and delivered by student members of the CCNY eSports Club, the event was a success. Barry Joseph, Principal, Barry Joseph Consulting, LLC. who led our gaming pathway study, worked with the eSports Club on developing the Harlem Week Exhibit. He discussed the experience in a blog. Barry has also posted four blogs summarizing the key findings of the Gaming Pathway research – his blog site of interesting information of video games and current trends. He has written a number of blogs discussing the Gaming Pathways study and provides a link to the Harlem Week Exhibit on video games presented by CCNY’s eSports Club.

**Establishment, Evaluation and Continuation of a Mentoring Program**

The National Society of Black Physicists, NSBP-HGS mentoring program was initiated for the 2020-2021 academic year by HGS’s Executive Director and Brown University Physics Professor, Dr. Stephon Alexander. It was successful in that a program and structure was developed, tested and evaluated. It was deemed effective in helping the program’s 20 plus middle and high school students in Harlem (Eagle Academy, Hamilton Grange, and NY Math Academy and Coaching Services) grow both personally and academically in spite of the disruptions in their lives and education due to COVID-19. Dr. Gillian Bayne, a Professor of Middle and High School education at Lehman College/CUNY, prepared an assessment report of the program that is available upon request. Some of the unique aspects of the program are the use of college students as mentors who “look like the mentees”, the remote nature of the program, the ability to weave together monthly workshops with projects involving STEM kits in which mentors and mentees work on together, the inclusion of mindfulness and meditation to help students develop their emotional/social skills, and the program’s connections to City College where a number of events were held. The second year of the program (2021-2022) has just launched, led again by Veeshan Narinesingh, a CCNY fifth-year physics PhD student, whose parents immigrated from Trinidad, grew up in the Bronx, and strongly identifies with our mentees.
Student and Operational Support

This mentoring program operated with the support of The West Harlem Development Corporation, many individuals and a couple of small foundations. It has developed into a replicable model that the HGS hopes to expand within the years ahead.

Veeshan Narinesingh has played an important role in the NSBP/HGS Mentoring Program, as well as the Gaming Pathways Project, and has made presentations to foundations and members of the NYC Council. The leadership and commitment of Farrah Simpson, a PhD student at Brown University, co-director of the Mentoring Project and President of the Student Association of the National Society of Black Physicists, and Tracy Edwards, also a student member of NSBP and a Ph.D. student at Michigan University, has made this program possible. We have been extremely fortunate to have a number of outstanding college students work on our programs this year. Milena Chakraverti-Wuerthwein provided invaluable support and leadership to the Gaming Pathways to CCNY Project. She is now working on her Ph.D. at the University of Chicago.

SAENY/HGS continued to receive support from Harlem-based organizations such as the West Harlem Development Corporation, the Harlem Community Development Corporation and the NYC Council sponsored by local council member. The National Society of Black Physicists provides both funding and volunteers from it student membership for the mentoring program focused on students attending middle, high school and a math academy and coaching service for high school students located in Harlem. In addition, SAENY recently received support from the Simons Foundation Science Sandbox program, the Jockey Hollow Foundation and received ongoing support from individual contributors.

To learn more about Science and Arts Engagement and the Harlem Gallery of Science visit its website.