



Peer-Led Professional Development and Mentorship: Reinventing Youth Workforce Development

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Museum of Science: Organizational Background

One of the world's largest science centers and New England's most attended cultural institution, the Museum of Science (MOS) introduces more than 1.3 million visitors a year to STEM (science, technology, engineering and math) through the world-class hands-on exhibits, programs and pre-K-12 curricula of its William and Charlotte Bloomberg Science Education Center. Over the past 188 years the Museum has evolved and grown since it was first established as the Boston Society of Natural History in 1830. As of the 2017 Annual Report, the Museum employees 391 full-time staff, 19 part-time staff, 233 temporary staff, and 384 volunteers to help support 1.4 million annual visitors. Additionally, over 149,000 school children participated in field trips, over 18,000 children and chaperones attended overnight programs, and over 102,000 school and public audiences were served by Traveling Programs.

A Workforce Development Program in Transition

The Museum of Science is committed to providing volunteer opportunities to youth, ages 14-18, to develop career skills and to establish a STEM-focused employment pathway. The Museum hosts over 100 youth volunteers, 50 paid summer youth interns, and 20 paid youth Program Assistants each year.

Youth volunteers that accrue 50 volunteer hours become eligible to apply for paid summer youth internship positions. Those who complete a semester of youth internship are eligible to apply for youth Program Assistant positions.

In addition to their regular departmental work, summer youth interns attend 6 weekly workshops to create community, develop workforce skills, and gain exposure to STEM fields. These workshops have evolved overtime. In 2015, School and Youth Programs reinvented the workshop model to move away from a project-based model to a peer-led professional development model.

Summer Youth Internship Workshops

Table 1: Weekly Workshop Topics for Summer Youth Internship Program

Week	Workshop Topic	Goal of Workshop
Week 1	Leadership and Communication	To establish the traits of an effective leader and acknowledge the importance of communication in leadership
Week 2	Cultural Competency and Identity	To create a community while exploring identity, power, and privilege and why it matters in the Museum
Week 3	Field trip to STEM Institution	To expose Interns to potential STEM careers and practicing STEM professionals
Week 4	College and Career Readiness	To prepare for job/college applications, interviews, and experiences
Week 5	Financial Literacy	To explore money management skills, earning power, and financial services
Week 6	Field trip to Cultural Institution	To connect our Interns with other Boston Youth Interns at similar cultural institutions

Table 2: Workshop Schedule Example for Leadership and Communication Theme

Time	Activity
10 minutes	Arrival and Attendance
5 minutes	Introduction to Workshop Theme
15 minutes	Ice Breaker Activity: <i>Follow the Leader</i>
25 minutes	Team Workshop Activity: <i>From Inside Out</i>
25 minutes	Individual Workshop Activity: <i>Creating your Personal Vision</i>
10 minutes	Break
15 minutes	Ice Breaker Activity: <i>Telephone Charades</i>
20 minutes	Team Workshop Activity: <i>Story Cubes</i>
45 minutes	STEM Guest Educator from Microsoft
10 minutes	Break
25 minutes	Hands-on Group Challenge: <i>Building Bridges</i>
30 minutes	Intern Activity Research Time
5 minutes	Closing Announcements

A Focus on Peer-Led Mentorship

Peer-Led Mentorship among Museum Youth

As an individual progresses through the Youth Workforce Development Program, they gain valuable insight into being a youth member of the Museum community. This insight can then be applied to mentor fellow youth who are orienting to the Museum and navigating the career ladder. Youth Program Assistants mentor youth interns, while youth interns mentor youth volunteers. In the Youth Programs department, Program Assistants have a unique opportunity to mentor Summer Youth Interns by co-leading weekly Workshops and planning youth social events. As former summer youth interns themselves, Program Assistants can better mentor and lead workshops due to their shared past experiences.

Peer-Led Mentorship among Partner Institutions

Museum youth have the opportunity to learn from and share their volunteer, intern, and staff experiences with other youth in neighboring institutions. When youth from other institutions visit the Summer Youth Internship Workshops, interns have the opportunity to model what they have learned through their workshops by leading activities to build community among their peers in Greater Boston.

Collecting Youth Feedback to Improve Future Youth Experiences

Each summer, Program Assistants from Youth Programs create a survey for the Summer Youth Interns to share their feedback and opinions on the overall Youth Workforce Development Program. The results from this survey inform future Program Assistant decisions on the schedule and content of the following year's program.

Case Study: Deshawn Jones, Jr.

Exhibit Hall Interpretation Volunteer

DeShawn started as an Exhibit Hall Interpretation Volunteer as a part of our Fenway High School Partnership. His responsibilities included engaging visitors in activities that incited excitement about science and technology and encouraged the use of science inquiry, engineering design, and mathematics skills. After exceeding 50 volunteer hours, DeShawn applied to be a Summer Youth Intern in the Tech Studio department.

Tech Studio Summer Youth Intern

As a Tech Studio Intern, DeShawn engaged with people of all ages using hands-on engineering and computer science activities. When asked about his experience, DeShawn said, "Interning at the Museum of Science has helped me learn more about my future career options. Before I started volunteering at the Museum, I wanted to be an automotive technologist. But being here and interacting with kids made me realize how I want to help make the world a better place. Now, I want to major in computer science". After completing 1 Summer Youth Internship, DeShawn applied to be an Exhibit Hall Interpretation Program Assistant.

Exhibit Hall Interpretation Program Assistant

As a Summer Program Assistant, DeShawn was considered Museum staff and received more hours per week and increased pay. DeShawn mentored and trained Exhibit Hall Interpretation Volunteers and developed a project for the department. At the end of the Summer, DeShawn was offered to stay on as a Program Assistant through the school year.



Figure 1: DeShawn Jones, Jr. interpreting for young visitors in the Suit-Cabot Laboratory

Resources Needed for Workforce Development Program



Staff
2 full-time employees, 2 part-time staff, and 1 College Intern.



Institutional Support
Departments to host youth Interns and Program Assistants



Funding
\$150,000 for youth salaries
\$1,500 for educational supplies, food, and transportation



STEM Network
Ability to recruit STEM professionals as guest speakers and identify field trip opportunities



Space
Classroom space to accommodate 20 people
Access to Museum Exhibits and the outdoors

Leveraging External Partnerships

STEM Guest Educators



Figure 2: Anne Pecsek, a Medical Illustrator at Argosy, sharing her work with youth interns

A major goal of the Youth Workforce Development Program is to expose the Interns to potential STEM career paths. One way we do this is by recruiting local STEM professionals to join our Workshop as Guest Educators. We actively recruit Guest Educators that represent the many diverse faces of STEM, including women, people of color, and individuals who are early on in their career.

Community Connections through Field Trips



Figure 3: Cohort of Summer Youth Interns visiting Microsoft NERD Center in Boston, MA

We offer 6 field trips for our Summer Youth Interns to STEM and Cultural institutions. Examples of STEM field trip locations include Microsoft NERD Center, Boston University (BU) School of Medicine, VA-BU-CLF Brain Bank, and the BU National Emergency Infectious Disease Laboratory (NEIDL). Examples of Cultural Institution field trip locations include Franklin Park Zoo, New England Aquarium, the MIT Museum, and the Museum of Fine Arts.

Looking to the Future

We continually strive to improve and grow the Youth Workforce Development Program and have recognized the following challenges and next steps to work through in the coming years:

Funding: Each year we need institutional support from our Advancement and Accounting teams to raise sufficient funds to support our youth intern salaries and program costs.

Space: A designated classroom space is integral to create a consistent and warm learning environment to comfortably fit up to 20 individuals while participating in various activity formats. We would love to secure a youth space in the future that could double as a youth zone throughout the year, in addition to a workshop space during the summer.

Career Ladder Model: Currently our youth career ladder is similar to a pyramid model. We have many available volunteer opportunities for youth, but only up to 50 openings for paid internships and 20 openings for Program Assistant positions. By moving to a ladder model, we would be able to retain more youth in various stages of our Youth Workforce Development Program.