

Beyond Docents: Developing a Program Model for High School Science Research, Communication, and Education Experiences

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MOS Youth Programs

- Large, urban science center (~130,000 sf exhibit space)
- Annually, ~50 youth staff and interns

NSF AISL Piloting and Feasibility Studies grant (2018 -)

- Exploring science identity formation in high school youth through *Living Laboratory*®
- Two cohorts of youth staff; year-long appointments
- Co-mentorship from Museum of Science and Boston University
- Receive training in science research, communication, and education practices



Core Program Elements

1. Engaging in **research** practices
2. Engaging in **science communication** practices
3. Engaging in **science education** practices
4. Experiencing **mentorship** from STEM professionals
5. Becoming a member of a **science community**



Science Identity

1. **Interest** in science
2. **Attitudes** about science
3. **Beliefs** about science
4. Perceived **belonging** in a science community

Cohort One: Pre-COVID

Science Practice

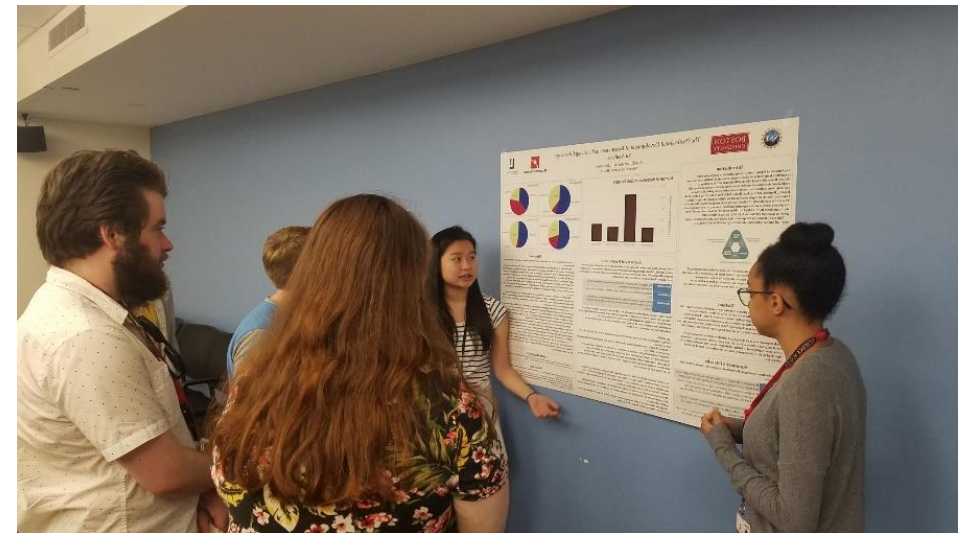
- Designed, conducted and reported on child development research
- Led educational programming

Mentorship

- Weekly workshops and job chats

Community

- BU campus trip
- Communicated research findings with academic and Museum communities



Cohort Two: During COVID



Cohort Two: During COVID

Science Practice

- Conducted virtual data collection
- Back-end development
- Technical training

Mentorship

- Weekly workshops

Community

- Integrated into MOS project teams
- Attended BU virtual lab meetings



<https://virtualexhibits.mos.org/mystery-skulls/>

Initial Evaluation Data

- Teens reported greatest increases in interest; feelings of self-efficacy complexified
 - “The less you know, the more confident you are. That happened over the course of this period.”
- Research has been the strongest element of the program, less so science education
- Virtual connections contributed to feelings of belonging, but teens sought to deepen connections
 - “We’re part of the team that’s trying to accomplish something, feeling we’re members of a science community”
- Virtual workshops had logistical challenges, but teens reported high engagement relative to other virtual programs they participate in

Looking Ahead to a post-Pandemic Future



- Return to on-site work, with modifications
- Connect virtual and physical program content
- Incorporate virtual professional networking
- Identify virtual professional development opportunities
- Focus group - *TBD*

Questions?



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