NATIONAL FEDERATION OF THE BLIND

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THE PROJECT TEAM

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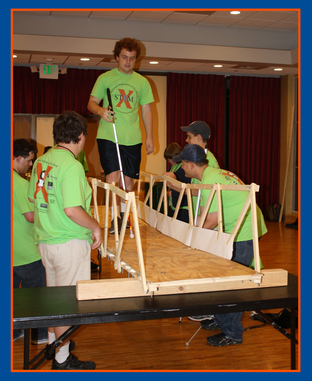
NATIONAL CENTER FOR BLIND YOUTH IN SCIENCE:
A PROJECT OF THE NATIONAL FEDERATION OF THE BLIND

About the Project

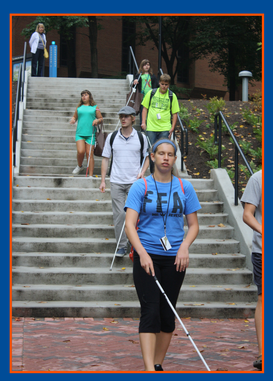


The National Federation of the Blind (NFB), with six science centers across the U.S., will develop, implement, and evaluate the National Center for Blind Youth in Science (NCBYS), a three-year, full-scale development project to increase informal learning opportunities for blind youth in STEM. Through partnerships and companion research, the NCBYS will lead to greater capacity to engage the blind in informal STEM learning.

The NCBYS will expose blind youth to nonvisual methods that facilitate their involvement in STEM; introduce science centers to additional nonvisual methods that facilitate the involvement of the blind in their exhibits; educate parents as to their child's ability to be independent both inside and outside the STEM classroom; provide preservice teachers of blind students with hands-on experience with blind students in STEM; and conduct research to inform a field that is lacking in published material. The NCBYS will:

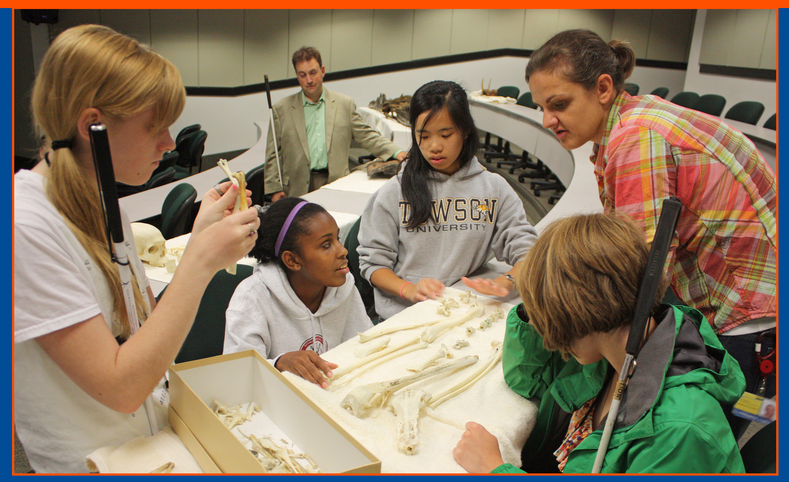
- Conduct six regional two-day NFB STEM2U programs, one day taking place at a local science center, in total the programs will serve 180 blind youth;
- Conduct concurrent onsite parent training sessions at each NFB STEM2U regional program;
- Incorporate preservice and early service teachers of blind students in hands-on activities; and
- Perform separate, week-long, advanced-study, residential programs—NFB EQ—for 60 blind high school juniors and seniors focused on the engineering design process.

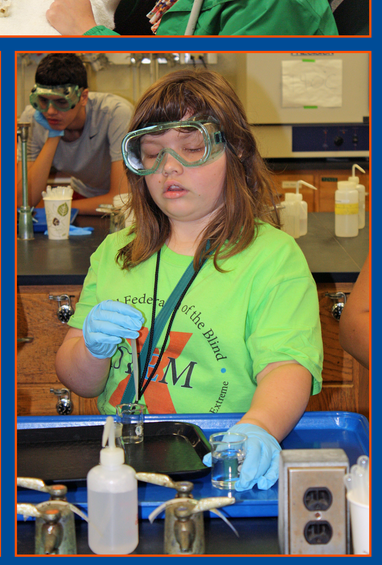
The initiative is a unique opportunity for science centers and the disability population to collaborate for mutual benefit, with lasting implications in informal STEM delivery, parent engagement, and teacher training. It is also an innovative approach to inspiring problem-solving skills in blind high school students through the design process.

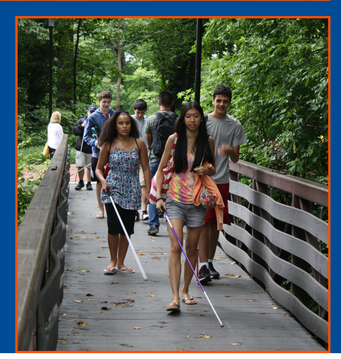


Goals

1. Contribute to the knowledgebase of effective practices regarding STEM education for the blind.
2. Educate families, blind youth, future educators, and museum personnel about the techniques and tools used to effectively engage blind youth in informal and formal STEM settings.
3. Strengthen digital resources for engagement of blind youth in STEM education.







Upcoming Program Details

Program	Location	Dates	Participants
NFB STEM2U Leadership Academy	Baltimore, MD	Sept. 5-7, 2014	30 blind high school students
NFB STEM2U Baltimore	Baltimore, MD	Nov. 6-8, 2014	10 blind high school students, 20 blind elementary school students, 20 parents of blind children, and 10 teachers of the blind
NFB STEM2U Boston	Boston, MA	March 12-14, 2015	10 blind high school students, 20 blind elementary school students, and 20 parents of blind children
NFB STEM2U Columbus	Columbus, OH	May 14-16, 2015	10 blind high school students, 20 blind elementary school students, and 20 parents of blind children
NFB EQ	Baltimore, MD	Aug. 2-8, 2015	20 blind high school juniors and seniors

Grant Year Two Museum Partners

- Port Discovery Children's Museum, Baltimore, Maryland
- Museum of Science, Boston, Massachusetts
- Center of Science and Industry (COSI), Columbus, Ohio

Audience/Program Participants

The audience includes students and those responsible for delivering STEM content and educational services to blind students. For students, the program will demonstrate their ability to interface with science center activities. Students will also gain mentoring experience through activities paired with younger blind students. Parents and teachers of blind students, as well as science center personnel, will gain understanding in the experiences of the blind in STEM and the steps to facilitate their complete involvement. Older students will pursue design inquiries into STEM at a more advanced level, processes that would be explored in post-secondary pursuits. By engaging these groups, the NCBYS will build infrastructure in the informal and formal arenas.

Lessons Learned

Originally, personnel believed that the project would need to produce a metric and rating system for museum and NFB staff to use in assessing museum accessibility, however it was determined that several instruments had already been established. The NCBYS program will instead focus on tools, guidelines, and recommendations for blind consumer groups to work with informal science institutions on implementing appropriate accessibility protocols and addressing concerns and obstacles as new exhibits are created and new technology emerges with unique accessibility concerns. As a result, it is expected that the adaptability of this instrument will allow for a more sustainable model moving forward.

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