



**NFB**

National Federation  
of the Blind

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Jernigan Institute

# **The National Federation of the Blind**

## **Jernigan Institute**

### **Blindness and STEM**

Presentation by Mark Riccobono  
Executive Director, Jernigan Institute



**NATIONAL CENTER FOR  
BLIND YOUTH IN SCIENCE**

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N C B Y S

# Purpose:

To improve instructional opportunities for blind students in science classrooms and to explore new innovations to increase exposure to science, technology, engineering, and math among the blind

# The National Federation of the Blind

- Established in 1940
- Over 700 local and state chapters
- Over 26 special interest divisions including:
  - National Organization of Parents of Blind Children
  - National Organization of Blind Educators
  - Science and Engineering Division
- Largest annual convention of the blind, drawing over 3,000 individuals

# The Jernigan Institute...

“...leads the quest to understand the real problems of blindness and to develop innovative education, technologies, products, and services that help the world’s blind to achieve independence.”

# Why Science?

- Blind youth are typically tracked out of science
- Misunderstanding and negative attitudes
- Science is practiced by many blind people despite existing barriers
- It challenges our imagination

# Building a Foundation for Exploration



# The National Center for Blind Youth in Science (NCBYS)

- A clearinghouse of resources and information about how blind youth can best learn and understand scientific and mathematical concepts
- Promote opportunities for blind youth in science through demonstration projects, partnerships, and public education
- Provide technical support to projects working to improve materials and instruction for blind youth in science and math
- Provide a national mentoring program built on the foundations established by the blind professionals of the NFB Science and Engineering Division
- Centralize research previously completed in this area and coordinate ongoing research efforts

# NCBYS Web Portal

Launched in 2006 to provide teachers, blind students, parents, and others who work with blind and low vision students with information and resources regarding blind youth and science, technology, engineering, and math

# [www.blindscience.org](http://www.blindscience.org)

- Resources
  - Materials, tools, and online resources
  - Broken down by specific field
- Careers
  - Blind scientists
  - Opportunities and resources
- Programs for blind students
- Instructional video
  - To educate teachers about nonvisual techniques in science instruction

# Science Academy

Two one-week summer sessions designed to dramatically change opportunities for the blind in science, technology, engineering, and math related subjects



# Circle of Life

- Expose blind youth to the “wow” of science
- Surround students with positive blind role models and instructors
- Focus on:
  - Earth sciences
  - Making observations
  - Using nonvisual skills to analyze the environment
  - Challenging their perceptions of science and blindness

# Rocket On!

- Challenge blind youth to pursue opportunities in the advanced sciences
- Complete a challenging rocket mission supported by blind mentors and NASA scientists
- Focus on:
  - Rocketry
  - Project management
  - Teamwork
  - Challenging their perceptions of science and blindness
  - Encouragement to pursue careers in science

# EXcellence through Challenging Exploration and Leadership (EXCEL)

- Internship program with NASA
- Six interns placed at one of three NASA sites
- 11-week program
- Aimed at younger college students to fill gap
- Opportunity for much-needed early work experience
- One-week training at the NFB
- Attended NFB National Convention

# NFB Youth Slam

The most dynamic gathering of  
blind youth ever!



# What was the NFB Youth Slam?

- Four day academy focusing on science, technology, engineering, and math
- Several tracks focusing on specific fields
- Short sessions to introduce other subjects
- Participants
  - 180 blind high school students
  - 80 blind mentors
  - 48 states represented

“From the unanswered questions about our world to the puzzles of the universe and beyond, we imagine a future where the blind are encouraged and empowered to apply their diverse capabilities to the exploration of new horizons along with their sighted peers. That is why we, the blind, have committed our Jernigan Institute to improving educational opportunities for blind youth in a way that no one else has ever imagined.”

—Dr. Marc Maurer, President  
National Federation of the Blind



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