A National Challenge

Department of Energy (DOE)
Office of Workforce Development
For Teachers and Scientists (WDTS)

- Prepare a diverse workforce of scientists, engineers, and educators
- Utilize DOE’s unique intellectual and physical resources
- Implement a proactive, data-driven, and results-focused model
Our Presence...

The Department of Energy’s 17 national laboratories and more than 50 world-class scientific user facilities are extraordinary platforms that reach students and educators across the country. In addition, the Department provides grants to more than 300 major universities and has partnerships with thousands of businesses. This scientific enterprise continually works at the frontiers of human knowledge and is a resource available to all U.S. citizens interested in pursuing educational and career opportunities in science and technology.
BNL Office of Educational Programs

The mission of the Office of Educational Programs ... initiatives will:

- Educate new generations of scientists, engineers, technicians, and teachers
- Encourage and promote science literacy
- Assist the scientific staff in achieving their goals
- Support and celebrate diversity
- Maintain BNL as a local, regional, national, and international educational asset

The Office of Educational Programs will fulfill this mission safely ...
DOE Funded Programs

- Funded by DOE’s Office of Workforce Development for Teachers and Scientists (WDTS)
  - Science Undergraduate Laboratory Internship (SULI)
  - Faculty and Student Teams (FaST)
  - Community College Institute (CCI)
  - Academies Creating Teacher Scientists (ACTS)
  - Pre-Service Teacher Program (PST)
BNL’s Science Learning Center

- Funded by Brookhaven Science Associates (BSA)
- Visited by over 40,000 local students each year
- Serves grades 1 through 6
- Programs introduce students to basic scientific concepts while connecting to BNL’s large facilities:
  - RHIC- Superconducting Magnets / Magnetism
  - NSLS- Light / Spectroscopy
  - NSRL- Mars Exhibit
- Programs are offered at no charge to the schools
Middle School and High School Exploration Laboratories

A partnership between BNL’s Office of Educational Programs and the Boards of Cooperative Education Services (BOCES) of New York State.

- Field trips to BNL and/or outreach to local school districts
- Hands-on laboratory experiences in genomics, structural biology, physics, chemistry, nanoscience, energy sciences, and environmental science
- Lab activities developed in collaboration with BNL scientists, users, post-docs, and graduate students
Summer High School Programs

- High School Summer Programs for Local Students.
  - Minority High School Science Apprenticeship Program (MHSAP)
  - Community Summer Science Program (CSSP)
  - High School Research Program (HSRP)
Interdisciplinary Consortium for Research and Educational Access in Science and Engineering (INCREASE)

- organization to promote research in Historically Black Colleges and Universities (HBCUs) and other minority-serving institutions (MSIs)
- Outcome of DOE-FaST
- INCREASE Faculty members represent 11 different HBCUs/MSIs
- NSLS, CFN, RHIC (PHENIX)
Challenges for User Facilities
Cyber-Enabled Access to User Facilities
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