Great Midwestern Space Grant Region Conference

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Jo Ann Charleston
Chief, Educational Programs Office
NASA Glenn Research Center
NASA GRC Pipeline

Preparing our next generation of scientists and engineers to enhance the Agency’s ability to recruit and sustain a world-class workforce.

- SEMAA (K-12)
- NASA Project (7-9)
- Explorers (9-12)
- College Bound (10-12)
- SHARP (11-12)
- Internship (freshman thru PhD)
Lewis Educational Research Collaborative

Internship/Fellowship Program (LERCIP)

Ten week summer paid internship program for students and secondary math and science teachers. Participants work on research assignments with GRC scientists and engineers aligned with the participants academic level and major. The LERCIP program is unique, such that it is the only NASA internship program that provides a bridge for graduating high school seniors.

Target Audience

- College-bound high school graduates
- Undergraduate & graduate students
- Two-year college students bound for baccalaureate
- Secondary school teachers

Partnerships:

- GRC Research and Institutional Organizations
  Approximately $1.2M/year
- Ohio Aerospace Institute
- Ohio Space Grant Consortium
LERCIP Program Educational and Professional Activities

- **Technical Presentation Workshop**
  - Provides students with ideas on how to prepare a successful presentation

- **Professional Development Workshop (“Thinking Outside the Box”)**
  - Exposes students to new ways to approach problem solving

- **Student Research Symposium**
  - Oral presentation on their internship assignment
  - Attendees mentor, branch/division personnel, senior management, and fellow students

- **Career Awareness Presentation**
  - Activity where LERCIP Scholars share their college experiences with LERCIP high school
  - (hosted by Center Director)

- **Student/Mentor Picnic**
  - Excellent networking activity; opportunity for interaction of student from middle school (NASA Project), High School and College

- **Student/Mentor Recognition Banquet**
  - To thank mentors/students for their participation and support

- **GRC Summer Job Fair**
  - Provide students with opportunity to talk with the various directorate representatives and Office of Human Resources Representatives on current or upcoming opportunities
2004 Participants: 178

NEEIS Rating: 4.67 out of 5

Participants are able to return to the program from the undergraduate through the doctoral level.

In 2004 LERCIP we had 13 LERCIP high school students continue on in the college program. This is one way that GRC is able to retain students in the pipeline.

Summer interns have co-authored and published technical papers, and some have made presentations at professional conferences.

NASA’s workforce has been enhanced by hiring LERCIP interns as co-ops, term hires, permanent hires and support service contractors.
National innovative K-12 program designed to increase participation and retention of historically underrepresented youth in the fields of science, technology, engineering and mathematics.

Today, SEMAA can be found at community colleges, four year colleges/universities, HBCUs, a Tribal College, high schools, middle schools, and elementary schools in 23 Urban and Rural locations throughout the U.S. These sites span 16 states and the District of Columbia.

Hands-On/Inquiry-Based K-12 Curriculum
- Challenging curriculum that is aligned to the National Math and Science Standards
- NASA Mission Based Theme

Aerospace Education Laboratory (AEL)
- The AEL is a State-of-the-art, electronically enhanced, computerized classroom that puts cutting-edge technology at the fingertips of students in middle and high school.

Family Café
- Informal setting where parents have fun sharing ideas and learning about the latest tools, techniques and resources to enhance their child’s education.

www.semaa.net
The Mobile Aerospace Education Laboratory (MAEL) is a portable AEL housed in a semi trailer and utilized as an exhibit at educational conferences, public affairs venues and air shows.

(Pay-for-service: approximately $1800/day)

http://www.grc.nasa.gov/WWW/MAEL/
Ames Research Center
Moffet Field, California
Central Arizona College
Coolidge, Arizona
Christian Fenger Academy
Chicago, Illinois
Columbia Challenger Center
Columbia, South Carolina
Cuyahoga Community College
Cleveland, Ohio
Fernbank Science Center
Atlanta, Georgia
Florida Memorial College
Oga Locka, Florida
Sinclair Community College
Dayton, Ohio
St. Mary’s County Technical Center
Leonardtown, Maryland
University of District of Columbia
Washington, DC
University of Maryland Eastern Shores
Princess Anne, Maryland
University of Puerto Rico
Arecibo, Puerto Rico
Virginia Air and Space Museum
Hampton, Virginia
Wayne State University
Detroit, Michigan
Warren County High School
Warrenton, North Carolina
Wiley College
Marshall, Texas
Winston-Salem State University
Winston-Salem, North Carolina
Winward Community College
Kaneohe, Hawaii
York College/CUNY
Jamaica, NY

Medgar Evers College/CUNY
Brooklyn, New York
Miami-Dade County Schools
Miami, Florida
Morgan State University
Baltimore, Maryland
NASA Glenn Research Center
Cleveland, Ohio
New Mexico State University
Las Cruces, New Mexico
Oglala Lakota College
Kyle, South Dakota
San Felipe Pueblo
New Mexico
SECME/Tennessee State University
Nashville, Tennessee

Harris-Stowe State College
St. Louis, Missouri
Kent Intermediate School District
Grand Rapids, Michigan
Lakeland Community College
Kirtland, Ohio (no AEL)
Livingstone College
Salisbury, North Carolina
Los Angeles Southwest College
Los Angeles, California
Martinsville Public Schools
Martinsville, Virginia

SEMMAA sites - 22
AEL sites - 10
SEMMAA site - 1
(no AEL)
Delivers live two-way interactive NASA produced educational programs from remote locations utilizing a distance learning network comprised of the webcasts, Mobile Television Production Van, and videoconferencing.

**Broadcasts:**
- STAR: Science Through ARts
- Earth Day: Remote Sensing
- Space Day: Mars
- DIME Drop
- Out of Control Flight
- 12 Seconds that Changed the World
- Mars: The Next Giant Leap

**Target Audience**
- 10000+ registered participants
- Representing 30 states and 23 countries
Broadcasts over the web using RealMedia technologies. Anyone with internet access can view the program using a free client from RealPlayer.

Broadcasts from remote locations over satellite utilizing the Glenn Mobile Television Production Van. Anyone with a satellite dish can downlink the signal.

Questions are asked via e-mail and answered on air.
Digital Learning Network

- Broadcasts through videoconferencing using IP and ISDN connections at no cost to the school.
- Questions answered directly through audio and video connections.
- One time event or a series of videoconferences on a topic.
- Pre and post assessment activities
Digital Learning Network
Interactive Connections

- Design Challenges / Students Presentations
- Collaborations with NASA Scientists
- Remote Broadcasts
- Professional Development
Digital Learning Network
On-line Catalog and Scheduler

http://education.nasa.gov/dln