



NASA SEMAA



2007

ANNUAL
REPORT

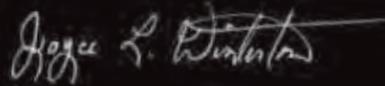
LEADERSHIP REMARKS

NASA SEMAA: A NATIONAL LEADER IN K-12 STEM EDUCATION

To inspire, engage, educate, and employ the “explorers and innovators of the next millennium,” NASA has designed its educational investments to strengthen NASA’s and the Nation’s future workforce; attract and retain students in science, technology, engineering, and mathematics (STEM) disciplines through a progression of educational opportunities for students, teachers, and faculty; and engage Americans in NASA’s mission.

Recognized as one of the top 18 programs in the 2007 Innovations in the American Government Awards competition by the Ash Institute for Democratic Governance and Innovation at Harvard University’s John F. Kennedy School of Government, the Science, Engineering, Mathematics and Aerospace Academy (SEMAA) serves as evidence of NASA’s ability to ignite the desire to learn in a unique and powerful way.

This year was an extraordinary one for SEMAA and education across the Agency; its momentum will propel us into a promising 2008 and beyond.



Dr. Joyce L. Winterton
NASA Assistant Administrator for Education

The Glenn Research Center is pleased to have been awarded responsibility for managing the Agency’s Science, Engineering, Mathematics, and Aerospace Academy (SEMAA) Project. Activities within the SEMAA Project inspire students across the Nation to pursue careers in Science, Technology, Engineering, and Mathematics (STEM) and fuel the NASA pipeline as the Agency pioneers the future in space exploration, scientific discovery, and aeronautics research. Congratulations on being recognized by Congress as “one of the Nation’s premier K-12 STEM educational programs.”



Woodrow Whitlow Jr.
Center Director, NASA Glenn Research Center

SEMAA is an emerging national leader in K-12 Science, Technology, Engineering, and Mathematics (STEM) education. During fiscal year 2007, SEMAA was recognized by Harvard University as one of the top 18 most innovative government programs/projects in the nation; and the 110th U.S. Congress wrote SEMAA into history via a congressional record, honoring and congratulating SEMAA as “one of the nation’s premier K-12 STEM educational programs.”

SEMAA possesses an established infrastructure for K-12 STEM education services and a presence in underserved communities that should not be overlooked. As the nation continues to increase its efforts in K-12 STEM education, SEMAA will utilize its infrastructure to help strengthen collaborations amongst STEM stakeholders in an effort to maximize the benefits to students and families and increase the nation’s overall return on investment in K-12 STEM education.



Gail Dolman-Smith
President & CEO, Paragon TEC, Inc.
NASA Contractor



SEMAA AT-A-GLANCE

NASA has a unique capacity to revitalize STEM education in America; utilizing its awe-inspiring subject matter, cutting-edge research opportunities, and world class facilities. NASA is currently investing in a portfolio of educational programs/projects focused on (1) Strengthening NASA and the nation's future workforce, (2) Attracting and retaining students in STEM disciplines, and (3) Engaging American's in NASA's mission. NASA SEMAA is aligned to NASA Education Outcome 2: Attracting and retaining students in STEM disciplines.



MISSION

SEMAA is an innovative, national project designed to increase the participation and retention of historically underserved and underrepresented K-12 youth in the areas of Science, Technology, Engineering, and Mathematics (STEM).

GOALS

Inspire a more diverse student population to pursue careers in STEM-related fields.

Engage students, parents/adult family members and teachers by incorporating emerging technologies.

Educate students utilizing rigorous STEM curricula, designed and implemented as only NASA can.

NASA SEMAA
2007 ANNUAL REPORT

NASA SEMAA IS...



Hands-On, Inquiry Based K-12 STEM Curricula

- Aligned to National Math, Science, and Technology Standards
- Encompass the research and technology of NASA's four Mission Directorates
- Provide NASA SEMAA graduates with up to 441 hours of advanced studies in STEM prior to enrollment in a post-secondary institution



Aerospace Education Laboratory (AEL)

- Places cutting-edge technology at the fingertips of NASA SEMAA middle and high school students
- Engages students in real world challenges relative to both an aeronautics and reduced gravity research scenario
- Houses real aerospace hardware/software including an Advanced Flight Simulator (AFS); a laboratory-grade, research wind tunnel; and a working, short-wave receiver and hand-held Global Positioning System (GPS) for aviation



Family Café

- Promotes sustained family involvement at NASA SEMAA sites nationwide
- Provides parents/caregivers with relevant parenting and STEM education information
- Researches and presents information to parents/caregivers on other STEM-related programs available for their child's participation in an effort to maximize student exposure and interest in STEM

SIGNIFICANCE OF THE UNDERREPRESENTED

African Americans, Hispanics, Native Americans, and persons with disabilities make up 24% of the general population, but only 7% of the science and engineering workforce; **representing the biggest gap in the U.S. STEM workforce.** (National Science Board. Science and Engineering Indicators, 2000).

STEM education research supports that if women and minorities participated in the science and engineering workforce proportional to their presence in the general population, there would be no U.S. talent gap.

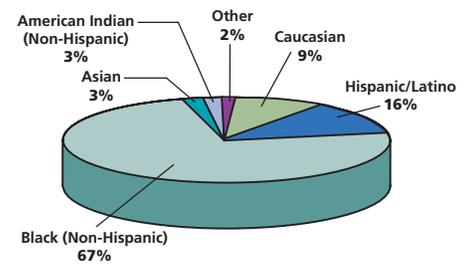
SEMAA'S FOCUS ON THE UNDERREPRESENTED

NASA SEMAA harnesses the collective resources of NASA, institutions of higher education, science centers, museums and primary and secondary schools to bridge the education gap for historically underrepresented K-12 youth in STEM. SEMAA's focus on the underrepresented is evident in the demographical statistics highlighted below.

2007 SEMAA STUDENT PARTICIPANT DEMOGRAPHICS

- Ethnic Minorities – 86%
- Low Income Students (below the national poverty level) – 53%
- Students with Special Needs – 495
- Females – 49%

NASA SEMAA STUDENTS ETHNIC BACKGROUND



TRANSCENDING BARRIERS

NASA SEMAA is committed to transcending barriers that stand between historically underrepresented students and the STEM classroom.

- Commitment to Critically Ill Children - Conducted a one-week summer session for critically-ill children at Egleston Children's Hospital (Atlanta, GA) for the third consecutive year. SEMAA teachers underwent immunization shots and worked closely with hospital staff to ensure the sterilization of all hands-on materials prior to admittance to the hospital classroom.
- Commitment to Students with Special Needs - Partnered with the Special Education Department at the University of the District of Columbia (Washington, D.C.) to provide the expertise necessary to maximize SEMAA learning opportunities for students with special needs.



NASA Official John M. Hairston, Jr. is presented with a congressional record for SEMAA

OUTCOMES BY DESIGN

NASA SEMAA is a national project, operating from 17 sites located throughout 13 states and the District of Columbia. Site locations include Historically Black Colleges and Universities (HBCU), Hispanic Serving Institutions (HSI), Tribal Colleges and Universities (TCU), science centers, museums, and elementary/secondary schools. During fiscal year 2007, NASA SEMAA sites inspired, engaged and educated 64,296 students, parents/caregivers and teachers.

INCREASING K-12 STUDENT EXPOSURE & INTEREST IN STEM

- Increased 3rd-12th grade exposure by 36 classroom hours annually, and K-2nd grade by 27 classroom hours annually
- Average student increase in STEM interests:
 - Science – 33%
 - Technology – 30%
 - Engineering – 40%
 - Mathematics – 30%



STRENGTHENING THE NATIONAL STEM PIPELINE

- Fostered the participation of NASA SEMAA students in 50+ other STEM programs/projects, thus maximizing student exposure and interest in STEM and strengthening the national K-12 STEM pipeline

INCREASING FAMILY INVOLVEMENT

- Provided parents/caregivers with up to 21 hours of STEM education and parenting workshops/focus groups annually
- Created exciting, hands-on, inquiry based, STEM-focused learning opportunities for students and parents/caregivers to work together

ENSURING PROJECT GROWTH THROUGH INNOVATION

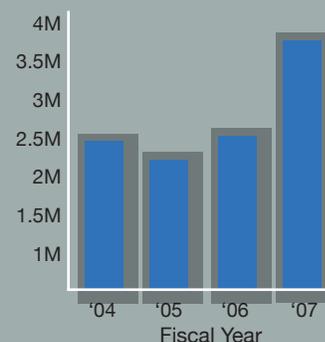
- Developed Space Medicine, Geo-Robotics, and Astrobiology High School Curriculum Modules
- Created a Mars Flight e-simulation for the SEMAA AEL
- Transformed AELs in select locations to state-of-the-art, distance learning laboratories
- Implemented Parent Centers in public schools as satellite operations to the SEMAA Family Café
- Developed a STEM Partnership Manual documenting a systems approach to partnership development and project sustainability

BUILDING PROJECT SUSTAINABILITY

- Collaborated with a network of 200+ partners
- Leveraged an annual record number \$3.8 Million in sustaining funds, representing over a 100% match to the budget provided by NASA



Funds Leveraged through Partnerships



SEMAA leveraged over \$11.2 million dollars in funding for K-12 STEM education from 2004-2007

2007 SEMAA SUCCESS STORY

Harvard Recognizes NASA SEMAA as a Top Government Innovator

“These finalists offer tangible results that innovative leaders can improve public services to their citizens. When government officials focus on achieving results through innovative thinking, they show that government has the capacity to successfully tackle serious problems while creating efficiencies.”

Dr. Stephen Goldsmith
Director of the Innovations
in American Government Program,
Harvard University



Harvard University presents NASA officials with a finalist award for the 2007 Innovations In American Government Award Competition



On September 24, 2007, the Harvard University John F. Kennedy School of Government's Ash Institute for Democratic Governance and Innovation presented NASA SEMAA with a Finalist Award for the 2007 Innovations in American Government Award Competition. With this award, NASA SEMAA was recognized as 1 of the 18 most innovative government programs in the nation; placing SEMAA in the highest 2% of applicants from the federal, state and local governments.

As a finalist, NASA SEMAA has received national press attention (appearing in a USA Today article entitled “The Best and the Brightest”) and a \$10,000 grant to be directed towards the dissemination and replication of project innovations.

Of special significance is the fact that NASA SEMAA was the only educational initiative to be recognized as a 2007 Innovations in American Government Award finalist. NASA SEMAA's success in elevating the education of America's youth to this platform is profound; a platform that addressed such critical issues as fostering renewable energy, improving health care access, promoting affordable housing, and 14 other extraordinary and deserving innovations.

2007 SEMAA SUCCESS STORY

Three NASA SEMAA Sites Collaborate on National Science Foundation (NSF) Grant



SEMMA students participate in the ASC curriculum



A SEMMA teacher engages in ASC professional development

NASA SEMAA sites at Tennessee State University (HBCU), New Mexico State University (HSI), and the Miami-Dade County Public Schools (the fourth largest school district in the nation) are collaborating on a Discovery Research K-12 (DRK12) grant from NSF totaling \$300,000.

These SEMAA sites are working together to advance STEM education by pilot-testing an exciting NASA based high school curriculum in astrobiology, and conducting educational research on the project and its impacts on underrepresented students (to be led by researchers from TSU).

The web-based curriculum, known as the Astrobiology in the Secondary Classroom (ASC) curriculum, includes hands-on science activities, computer simulations, and analysis of real NASA data sets. SEMAA students currently participating in the project are practicing authentic science inquiry while pondering the “big questions” of life on earth. Once the pilot-testing

and research phase is complete, the curriculum will be replicated at NASA SEMAA sites nationwide.

The ASC curriculum was developed through a collaboration of the Minority Institution Astrobiology Collaborative, the NASA Astrobiology Institute, and educators and curriculum developers from TSU. Additionally, scientists from the Goddard Center for Astrobiology, the Carnegie Institute of Washington, and the Indiana-Princeton-Tennessee Astrobiology Initiative supported the curriculum development team.

“The NASA SEMAA Project has a foundation for K-12 STEM education and a presence in underserved communities that is valuable to NSF’s mission”.

Dr. Julia V. Clark
Program Director, Division of
Research on Learning (DRL)
National Science Foundation



2007 SEMAA SUCCESS STORY

NASA SEMAA Students Pursue STEM Degrees/Impact STEM Workforce

Three SEMAA graduates received the 2007 NASA SEMAA Next Generation Pioneer Award. This prestigious national award is presented annually to leading NASA SEMAA graduates for their long term participation in SEMAA and subsequent accomplishments related to the study of STEM.

“SEMAA inspired me to pursue a career as an aerospace engineer. My dream is to one day work for NASA!”

Manuel Sosa,
NASA SEMAA Graduate/
Aerospace Engineering Major,
New Mexico State University

Tamela Jones participated in SEMAA at Wayne State University (Detroit, MI) for 8 years, and has since graduated from Wilberforce University with a Bachelor's of Science in Computer Science. Tamela is currently working on her Masters in Management Systems/Information System Management at the Keller Graduate School of Management. In addition to her graduate studies, Tamela is employed by the Corporate Internet Group of JP Morgan Chase; where she works as a Researcher for the Safety and Evacuation Team.



Liam Rattray participated in SEMAA at Fernbank Science Center (Atlanta, GA) for 6 years, during which time he began the SEMAA LINKS Engineering Team and developed an 8-week curriculum module for SEMAA high school students that resulted in the conversion of a commercial truck to run on pure waste vegetable oil. Liam is currently a sophomore and honors student at the Georgia Institute of Technology, majoring in Public Policy.

Manuel Sosa participated in SEMAA at New Mexico State University (NMSU) (Las Cruces, NM) for 4 years; during which time he was an honors student and began the Gadsden High School SEMAA Club. Under Manuel's leadership, the SEMAA Club took on two major engineering design challenges; in which they built a 15' microgravity droptower that they presented during the 2006 X-Prize Cup, and designed a Moon Buggy that they drove in the 14th Annual Great Moon Buggy Race Competition. Manuel is currently a freshman at NMSU majoring in Aerospace Engineering.



THE POWER OF PARTNERSHIPS

NASA SEMAA PARTNERSHIP VISION

“To foster formal partnerships and collaborations amongst global STEM stakeholders to maximize student exposure and interest in STEM and increase America’s overall return on investment in K-12 STEM education.”

SEMAA National Sustainability Committee (NSC)

NASA SEMAA sites are required to develop partnerships annually that will both enhance and sustain project services beyond NASA funding. During fiscal year 2007, the SEMAA sites leveraged over \$3.8 Million in partnership funds (including both financial and in-kind support), constituting more than a 100% match to the total project budget provided by NASA.

Below are just a few examples of local SEMAA partnerships developed during the 2007 fiscal year:

- **National Science Foundation (NSF)** – Provided \$300,000 for the adaptation of a NASA Astrobiology curriculum for historically underrepresented K-12 students; bringing NSF’s year-to-date contributions to SEMAA to just over one-half million dollars.
- **Institute for Museum and Library Services (IMLS)** – Provided \$150,000 to SEMAA at Fernbank Science Center (Atlanta, GA) for the creation of Parent Centers in the public schools. The Parent Centers are being established in response to requests from school administrators to support their efforts to increase family involvement within the schools.
- **New Mexico State Legislature** – Passed a State House Bill to make funding of the NASA SEMAA Project at New Mexico State University (Las Cruces, NM) a recurring line item in the state’s budget. The \$80,000 in annual funding from the state will support the continued expansion of the project throughout the southern half of New Mexico.
- **American Honda Foundation** – Provided \$40,000 for SEMAA at Cuyahoga Community College (Cleveland, OH) to support the expansion of the project to additional inner city youth.

To supplement local partnership efforts and ensure SEMAA’s long term sustainability, the newly formed SEMAA NSC will begin developing the first ever national partnerships for SEMAA during the 2008 fiscal year.

A partial list of 2007 NASA SEMAA partners is included on page 9.



LEADERSHIP AND FINANCIAL STATEMENT

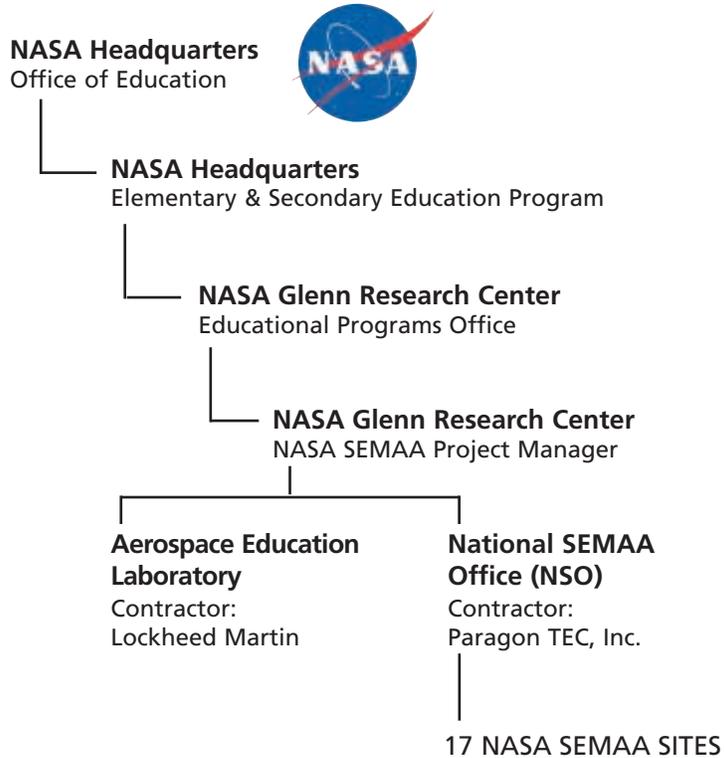
“With increasing demands on our economy, workforce, and national security, STEM education is more important than ever.”

Senators Richard Durbin (D-IL) & Norm Coleman (R-MN),
Co-Founders - Bipartisan Science/Math Education Caucus, U.S. Senate



- 1-District of Columbia**
University of the District of Columbia, Washington
- 2-Florida**
Miami-Dade County Public Schools, Miami
- 3-Georgia**
Albany State University, Albany
- 4-Georgia**
Fernbank Science Center, Atlanta
- 5-Maryland**
Morgan State University, Baltimore
- 6-Michigan**
Wayne State University, Detroit
- 7-New Mexico**
New Mexico State University, Las Cruces
- 8-New York**
York College/CUNY, Jamaica Queens
- 9-North Carolina**
Livingstone College, Salisbury
- 10-North Carolina**
Warren County High School, Warrenton
- 11-Ohio**
Cuyahoga Community College, Cleveland
- 12-Ohio**
Wilberforce University, Wilberforce
- 13-South Carolina**
Richland County School District One, Columbia
- 14-South Dakota**
Oglala Lakota College, Kyle
- 15-Tennessee**
Tennessee State University/SECME Inc., Nashville
- 16-Texas**
Wiley College, Marshall
- 17-Virginia**
Martinsville City Public Schools, Martinsville

ORGANIZATIONAL CHART



2007 NASA SEMAA BUDGET

NASA SEMAA Site Operations (17 sites)	\$1,843,750
National SEMAA Office Operations* - Contractor	\$1,025,000
Aerospace Education Laboratory** - Contractor	\$100,000
NASA Glenn In-House Costs	\$312,250
Grand Total	\$3,281,000

* The National SEMAA Office and Aerospace Education Laboratory contracts were combined at the beginning of 2nd quarter FY07.

** The Aerospace Education Laboratory contract was in operation for 1st quarter FY07 only as a separate contract.

For more information on the NASA SEMAA Project, contact Paragon TEC, Inc. at (216) 361-5555, or visit the website at www.semaa.net.

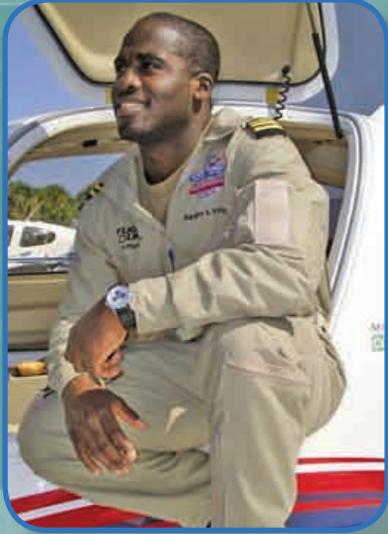
NASA SEMAA PARTNERS

“After my first year doing SEMAA, I knew I wanted to become an aeronautical engineer. I had never even considered becoming an engineer before SEMAA.”

Shalini Chudasama

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| ADC Foundation | J & J Southeast | Tommy Hilfiger Foundation |
| Air Force Association (AFA) | Jet Propulsion Laboratory | Tuskegee Airman |
| Albany State University | John F. Kennedy Middle School | U.S. Immigration and Customs Enforcement |
| Alcoa Foundation | Johnson Space Center | United Black Fund |
| American Honda Foundation | JWIRE Enterprises | United States Department of Education |
| Arizona State University | Kennedy Space Center | University of the District of Columbia |
| Baltimore Metropolitan Housing Authority | Kiwanis Club of Cleveland | Vanderbilt University |
| Berry's Catering | Langley Research Center | Verizon Wireless |
| Best Buy | Las Cruces Public Schools | Virginia Department of Aviation |
| Boy Scouts of America | Livingstone College | Wal-Mart |
| Boys and Girls Club | Lockheed Martin | Warren County Office of the City Manager |
| Children & Charity Foundation | Lucy Sale Foundation | Warren County School System |
| Chums, Inc. | Marshall Space Flight Center | Wayne State University |
| Citibank | Martha Holden Jennings Foundation | Wilberforce University |
| Citigroup Community Fund | Martinsville City Schools | Wiley College |
| City of Detroit Mayor's Office | Mathematics Matters Every Day (M ² ED) | Windsor Hills Elementary School |
| Civil Air Patrol | Miami Central Senior High | X-Prize Corporation |
| ConEd | Miami-Dade County Police Department | York College, CUNY |
| Cuyahoga Community College | Miami-Dade County Public Schools | Young Eagles |
| D.C. Employment Services | Michael Jordan Foundation | Youth Positive Direction Center |
| DC Council of Engineering and Architectural Society | Morgan State University | |
| Dominos | NASA Headquarters | |
| Dougherty School System | National Foundation for Teaching Entrepreneurship | |
| DTE Energy Foundation | National Science Foundation | |
| Experience Aviation | Nat's Catering | |
| Fernbank Science Center | New Mexico State Legislature | |
| First Book | New Mexico State Senate | |
| Fisher Scientific | New Mexico State University | |
| Florida Department of Education | North Miami Beach Senior High School | |
| Florida Memorial University | Oglala Lakota College | |
| Food Bank of Southwest Georgia | Paragon TEC | |
| Gadsden Public School District | Pine Ridge Indian Reservation Schools | |
| Girl Scouts of America | Project Academics Related to Success (A.R.T.S.) | |
| Glenn Research Center | Qwest Foundation | |
| Goddard Space Flight Center | RGK Foundation | |
| Grace Church Societies | Richland County School District One | |
| Holmes Elementary School | SECME, Inc. | |
| Institute of Electrical and Electronics Engineers (IEEE) | Success Institute | |
| Institute of Museum and Library Services (IMLS) | Tennessee Space Grant Consortium | |
| Intel Corporation | Tennessee State University | |
| International Womens' Air and Space Museum | The Parent Academy | |
| Intrepid Sea, Air, and Space Museum | Thomas H. White Foundation | |





“It is vital that as technology advances, so do the minds of our future workforce. By offering exciting STEM education courses to thousands of students nationwide, NASA SEMAA is playing a critical role in making this happen.”

Barrington Irving (First person of African descent and the youngest person to fly solo around the globe - 2007)

All student photos in this report feature actual SEMAA participants.

“Resolved that we celebrate and honor SEMAA as one of the nation’s premier K-12 STEM educational programs.”

110th United States Congress
NASA SEMAA Congressional Record

“SEMAA has brought a world of opportunities to our students at Skyway Elementary.”

Velma Arnold,
NASA SEMAA Teacher (Miami, FL)

“The committee commends SEMAA for its focus on underserved and underrepresented populations of students and on inspiring their interest in science and engineering...SEMAA is an excellent project for reaching the intended participants.”

National Research Council,
National Academies

SEMAA Data for the Office of Management and Budget (OMB)

The Office of Management and Budget (OMB) has assessed Federal Government programs using a standard questionnaire called the Program Assessment Rating Tool (PART). The questions relate to a program's performance and management, and Federal agencies provide detailed explanations and evidence to support their answers on the questionnaire. The program ratings range from Effective at the highest to Ineffective or Results Not Demonstrated at the lowest end of the scale. All PART evaluations contain follow-up actions and improvement plans. OMB has assessed 1,004 Federal programs, or 98 percent, of all Federal programs. The results are available to the public at www.expectmore.gov.

NASA Education participated in the PART in 2007. SEMAA data submitted to NASA's Office of Education in support of the 2007 PART is outlined below.

PART Measures

Percentage increase in number of elementary and secondary student participants in NASA instructional and enrichment activities

FY07 Baseline (17,773 Direct Student Participants)
Although an official baseline was not established in FY06, SEMAA served 15,760 Direct Student Participants that

year. In FY-2007 SEMAA served 2,013 more Direct Student Participants resulting in an 12.77% increase over FY-2006.

Level of student interest in science and technology careers resulting from elementary and secondary NASA education programs

50% of respondents representing Direct Student Participants in grades 4-12 indicated plans to work in a STEM career after completing their studies.

33.5% was the overall average increase in student interest in STEM

33.3% average increase in Science
30.3% average increase in Technology
40.0% average increase in Engineering
30.3% average increase in Mathematics

Note: Feedback collected from Direct Student Participants in grades 4-12.

More than 86% of respondents either "Agreed" or "Strongly Agreed" that they learned more about careers in STEM, resulting in a 4.4 average rating on a 5.0 rating scale.

Output Measures

Percentage increase in number of elementary and secondary student participants in NASA instructional and enrichment activities

17,773 Direct Student Participants (86% ethnic minorities, 49% female)

Ethnic Breakdown

American Indian/Alaska Native = 484

Asian = 444

Black/African-American = 12,021

Hispanic/Latino(a) = 2,917

Native Hawaiian/Pacific Islander = 1

Multi-Racial (Two or More Races) = 45

White (Non-Hispanic) = 1,586

Other = 275

Gender Breakdown

Males = 9,104

Females = 8,669

Grade

Grades K-4 = 8,702

Grades 5-8 = 6,985

Grades 9-12 = 2,086

Students with Special Needs

Direct Student Participants with Special Needs = 495

Students Living Below the Poverty Line

Percentage of Direct Student Participants Living Below the Poverty Line = 53%

Number of elementary and secondary student participants in NASA-sponsored extended learning opportunities

24,917 Total Outreach Participants (K-12 Students)

Breakdown of Outreach Numbers

AEL Student Outreach Participants = 11,034

- American Indian/Alaska Native = 18

- Asian = 491

- Black/African-American = 7,560

- Hispanic/Latino(a) = 1,092

- Native Hawaiian/Pacific Islander = 0

- Multi-Racial (Two or More Races) = 9

- White (Non-Hispanic) = 1,857

- Other = 7

- Males = 5,288

- Females = 5,746

Other Student Outreach Participants = 13,883

- Other Outreach Students with Special Needs = 77

Number of opportunities for family involvement

SEMAA provided a total of 270 opportunities for family involvement during FY-2007.

SEMAA also engaged 5,393 parents/caregivers with 736 hours of structured, STEM focused content.

Outcome Measures

Activities and investigations result in increased student interest in STEM

33.5% was the overall average increase in student interest in STEM

33.3% average increase in Science

30.3% average increase in Technology

40.0% average increase in Engineering

30.3% average increase in Mathematics

Note: Feedback collected from Direct Student Participants in grades 4-12.

Activities and investigations result in increased student knowledge about careers in STEM

More than 86% of respondents either “Agreed” or “Strongly Agreed” that they learned more about careers in STEM,

resulting in a 4.4 average rating on a 5.0 rating scale.

Note: Feedback collected from Direct Student Participants in grades 4-12

Family participants will show an increased interest in their student’s STEM coursework

464 Family Café participants from 12 SEMAA sites participated in a survey which yielded a 45.42% increase in their overall interest in their student’s STEM coursework as a result of their participation in SEMAA.

Family Café Participant Data	
Science Interest Increase	46.17%
Technology Interest Increase	42.90%
Engineering Interest Increase	54.05%
Mathematics Interest Increase	38.57%
Overall STEM Interest Increase	45.42%

Efficiency Measures

Percentage of programs that operate through Digital Learning Network (DLN) structures

Data source: Survey Instrument (see data question below)
Thirteen (13) out of fourteen (14) SEMAA sites participated in the survey.

During FY-2007, this NASA SEMAA site accessed NASA Content via the following: (Check all that Apply)

- NASA DLN (Digital Learning Network) = 38%
- NASA Webcast (Live/Archived) = 85%
- NASA Podcast = 15%
- NASA Videoconference = 23%
- e-Simulations = 23%

Global Efficiency Measures

Ratio of funds leveraged by NASA funding support

In FY-2007, SEMAA sites leveraged \$3.8M (Financial and In-Kind Contributions) supported by a network of 200+ partners nationwide.

Total Financial Contributions: \$1,474,928.29

Total In-Kind Contributions: \$2,369,376.20

Grand Total: \$3,844,304.49