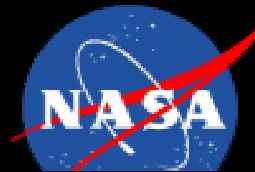


# 2005 NASA Mid-Atlantic Regional Space Grant Meeting September 16, 2005



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New York City Metro Area



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# NASA Goddard Space Flight Center New York City Research Initiative

<http://education.gsfc.nasa.gov/nycri>

- **FY02 - Charge from NASA GSFC Education and Equal Opportunity Officers**
- **FY03 - Pilot Summer Research Program**
- **FY04 - Summer and Academic Year Components**
- **FY05 - Summer and Academic Year Components**

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## COMPONENTS

## ACTIVITIES

### SUMMER RESEARCH INSTITUTE

Teams of high school and college students and faculty are assigned to university principal investigators of NASA research projects or to NASA GISS scientists



- Weekly content/research seminars, team research reports, visits to research laboratories and informal education institutions.
- Team presentations at local and national research conferences.
- Final Research Summit (NASA, NSF, NOAA, DOD and USDE).

### ACADEMIC YEAR

Dissemination of NASA Research



- Formulation, implementation and evaluation of high school and college STEM research based learning units and courses.
- Teacher preparation/enhancement.
- Participate in NASA Competitions
- Education/Research Outreach

### STIPENDS



Existing NASA, NSF and NYCRI partner universities research programs provide student and faculty research stipends.

# NYCRI Formal Education Partners

- **New York (CUNY):** The City College of New York, Hunter College, Queensborough Community College, LaGuardia Community College, Medgar Evers College, York College
- **New York (non-CUNY):** Polytechnic University, State University of New York at Stony Brook
- **New Jersey:** Stevens Institute of Technology, New Jersey Institute of Technology, Rutgers University
- **Connecticut:** Southern Connecticut State University

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# NYCRI Informal Education Partners

- American Museum of Natural History and The Hayden Planetarium
- Brookhaven National Laboratories
- Liberty Science Center
- Connecticut Science Center Collaborative
- Cradle of Aviation Museum
- Wildlife Conservation Society

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# Government Agencies and Programs

- **NASA Goddard Space Flight Center and Goddard Institute for Space Studies: NASA SHARP\*, MASTAP, MUSPIN, SEMAA, USRP, GSRP, NSFR, NSGC, URC - STSP (FY06)**
- **NSF: LSAMP, RET**
- **USDE: McNair Program**
- **NYCDE and NYSDE**

\*discontinued - to be replaced by a new program

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# NASA Education Office Criteria for Exemplary Programs

- **NASA Content**
- **Customer Focused**
- **Pipeline/Diversity**
- **Partnerships/Sustainability**
- **Evaluation**

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## **NYCRI CUSTOMER FOCUSED CRITERIA**

**Customer 1** – Individual students will be encouraged to stay in school – NYCRI especially addresses the need to keep NYC Metropolitan Area high school and community college students on the STEM “Pathway, a.k.a. Pipeline” from elementary school, middle school, high school, undergraduate, to graduate school and into the STEM workforce.

**Customer 2** – High school and college faculty are provided with unique teaching tools (NASA research integrated into existing STEM curricula) and compelling teacher experiences.

**Customer 3** – Institutions (K-12, colleges and universities) who wish to improve their capacity to keep students in STEM degree programs.

**Customer 4** – Use of NYCRI partners resources and facilities- both formal and informal institutions - to share NASA discoveries with the parents, students, local NYC, NJ and CT community centers and the general public throughout the academic school year.

## **NYCRI Pipeline and Diversity Criteria**

The NYCRI links NASA high school, undergraduate, and graduate student and faculty fellowship programs (such as NASA SHARP\*, USRP, GSRP, and other NASA programs, such as SEMAA, MASTAP, MUCERPI, MUSPIN and SGC) to research projects supported by various NASA enterprises.

The NYCRI summer research institute and academic year components utilize and link all the resources of our formal and informal educational partners.

Partnerships with programs which target underrepresented groups, such as the NSF Louis Stokes AMP, USDE McNair Program, NYSED C-Step Program, NASA GISS, as well as a collaboration between three federal government agencies: NASA, NSF, and USDE, will ensure a diverse pool of students and faculty for the NYCRI program.

# ***NYCRI Four Level Evaluation Criteria***

## *Level 1 Evaluation- Reactions*

Just as the word implies, evaluation at this level measures how participants in a training program react to it. In addition, participants' reactions have important consequences for learning (level two). Although a positive reaction does not guarantee learning, a negative reaction almost certainly reduces its possibility.

## *Level 2 Evaluation- Learning*

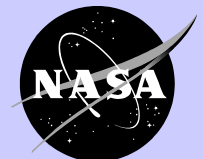
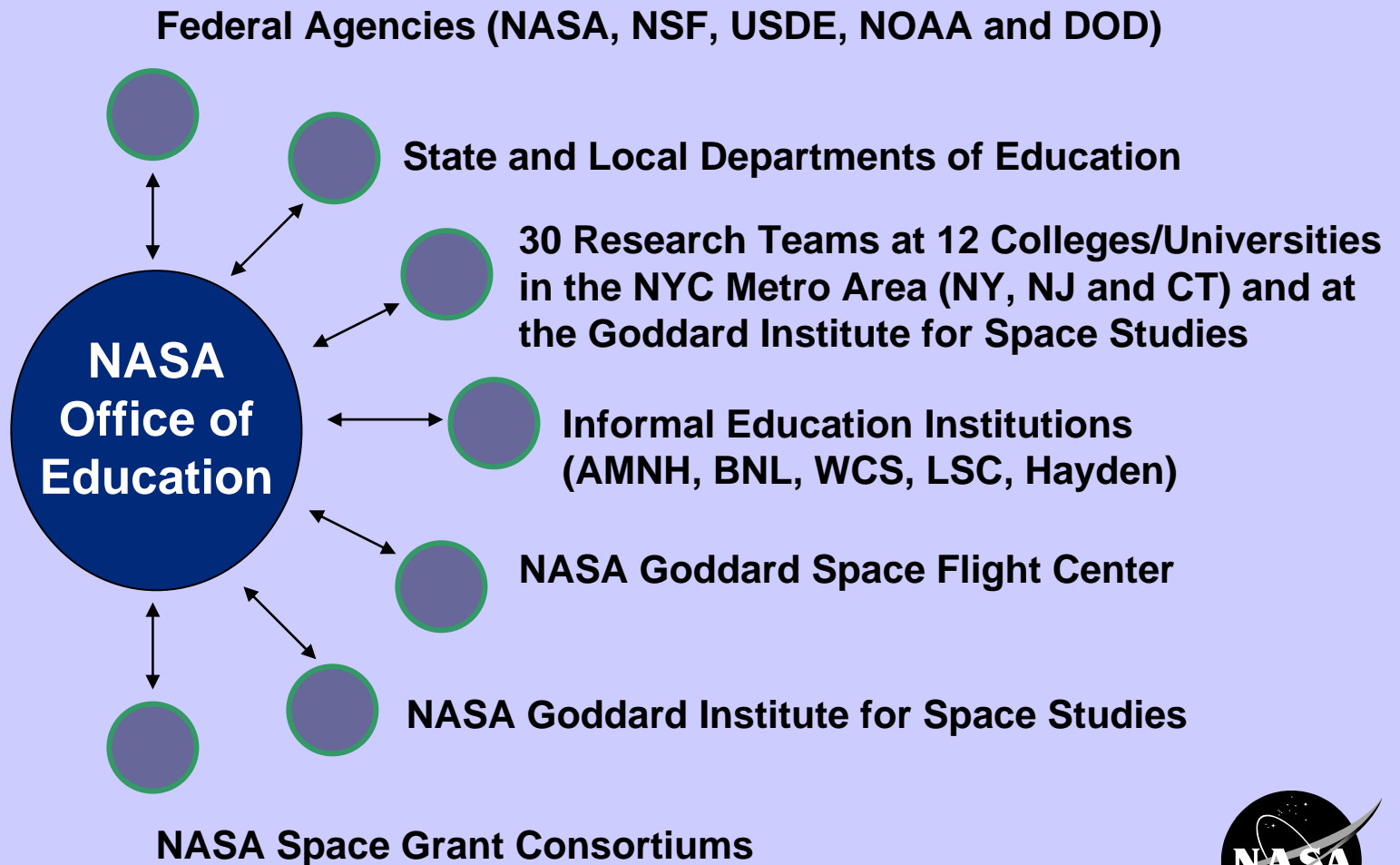
To assess the amount of learning that has occurred due to a training program, level two evaluations often use tests conducted before training (pretest) and after training (post test).

## *Level 3 Evaluation- Transfer*

This level measures the transfer that has occurred in the learner due to the training program. Are there newly acquired skills, knowledge or attitudes?

## *Level 4 Evaluation- Results*

# NYCRI Partnerships and Sustainability



# NYCRI Contact Information

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