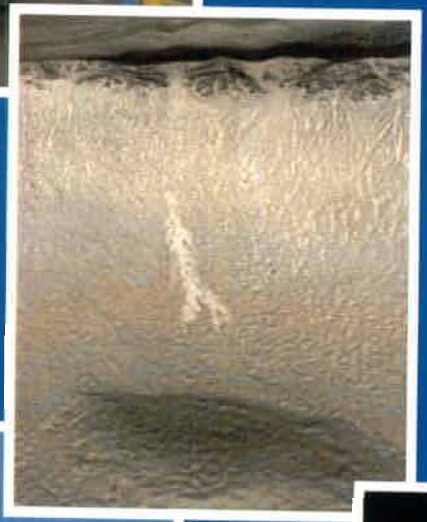
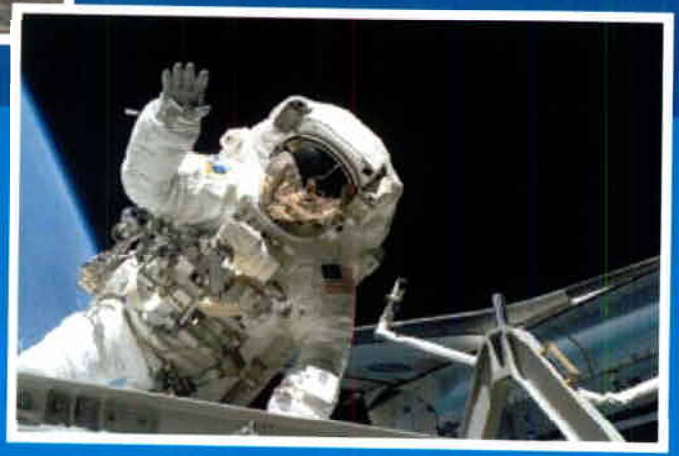
National Aeronautics and Space Administration





FY 2008 Budget Estimates

Cross-Agency Support Programs

Cross-Agency Support Programs provides a focus to several ongoing activities and provides a strategic approach to managing some of NASA's unique research facilities. This budget area consists of four Themes: Education, Advanced Business Systems, Innovative Partnerships Program, and Shared Capabilities Assets Program.

Budget Distribution

Budget Authority ($ millions)	FY 2006 Actual	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
FY 2008 President's Budget Request	**533.4**	**502.0**	**489.2**	**453.5**	**460.4**	**454.7**	**454.4**
Education Theme	162.4	167.4	153.7	152.8	152.7	149.8	149.6
Advanced Business Systems (IEMP)	156.3	97.4	103.1	69.4	71.6	67.6	67.5
Innovative Partnerships Program	214.8	215.1	198.1	197.2	199.8	200.0	200.0
Shared Capability Assets Program	--	22.1	34.3	34.2	36.2	37.3	37.2
FY 2007 President's Budget Request	**533.5**	**491.7**	**497.9**	**467.1**	**476.8**	**482.2**	--
Education Theme	162.4	153.3	152.4	153.1	154.0	153.3	--
Advanced Business Systems (IEMP)	156.3	108.2	106.9	73.8	78.5	80.6	--
Innovative Partnerships Program	214.8	197.9	205.5	206.2	209.7	212.9	--
Shared Capability Assets Program	--	32.2	33.1	33.9	34.7	35.5	--
Total Change from FY 2007 President's Budget Request	**0.0**	**10.3**	**-8.7**	**-13.6**	**-16.4**	**-27.5**	**454.4**

Note: FY 2007 column represents the 2007 President's Budget in full-cost simplification.

Budget Changes

Budget Authority ($ millions)	FY 2006 Actual	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Total Changes	--	10.3	-8.7	-13.6	-16.4	-27.5	454.4
Programmatic Content	--	--	-34.4	-34.1	-34.1	-34.0	454.4
Education Theme	--	--	-11.4	-11.4	-11.3	-11.3	149.6
Advanced Business Systems (IEMP)	--	--	-0.9	-0.6	-0.6	-0.6	67.6
Innovative Partnerships Program	--	--	-22.1	-22.1	-22.2	-22.1	200.0
Shared Capability Assets Program	--	--	--	--	--	--	37.2
Programmatic Transfers	--	--	9.6	9.5	10.6	11.1	--
Shared Capability Assets Program	--	--	9.6	9.5	10.6	11.1	--
Institutional Adjustments	--	10.3	16.1	11.0	7.1	-4.6	--
Education Theme	--	14.1	12.6	11.1	10.1	7.9	--
Advanced Business Systems (IEMP)	--	-10.8	-2.8	-3.9	-6.3	-12.5	--
Innovative Partnerships Program	--	17.2	14.6	13.0	12.3	9.3	--
Shared Capability Assets Program	--	-10.2	-8.3	-9.2	-9.0	-9.3	--

Note: Changes in Programmatic Content reflect the increases or decreases made directly to a program or project in response to cost increases, schedule or technical changes, or a change in Agency priorities.

A Programmatic Transfer is the movement of funding and content to another part of the Agency to reflect either a change in program management or to support Agency-wide capabilities.

Institutional Adjustments are changes in the allocation of Agency-wide costs to a given program.

Highlights of Programmatic Changes

Cross-Agency Support Programs
Education Theme
Programmatic Content:
Redirected funds from Education to address higher priority NASA mission requirements.
Institutional Adjustments:
Full Cost Simplification.
Advanced Business Systems (IEMP)
Programmatic Content:
Redirected funds to address higher priority NASA mission requirements.
Institutional Adjustments:
Full Cost Simplification.
Innovative Partnerships Program
Programmatic Content:
Red Planet Capital eliminated for higher Agency priorities. *Reduction to Technology Transfer.*
Programmatic Transfers:
Centennial Challenges from Exploration Systems Mission Directorate. No net funding change.
Institutional Adjustments:
Full Cost Simplification.
Shared Capability Assets Program
Programmatic Transfers:
HECC Budget transfered to SMD, but HECC multi-discipline Agency management support still part of the SCAP program. *New SCAP Facility/Capability investments for: Thermal Vacuum Chambers (TVC); Simulators; and Arc-Jets.* *Flight Operations, and Test Infrastructure was also transferred to SCAP, but the budget remains in Aeronautics Research Mission Directorate's Aeronautics Test Program.*
Institutional Adjustments:
Full Cost Simplification.

Mission Directorate:	Cross-Agency Support Programs
Theme:	Education Theme

Theme Budget

Budget Authority ($ millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Education Theme	162.4	167.4	153.7	152.8	152.7	149.8	149.6
Education	162.4	167.4	153.7	152.8	152.7	149.8	149.6

Note: FY 2007 column represents the 2007 President's Budget in full-cost simplification.

Highlights of Theme Changes

Education Theme	FY 2008		
	FY 2007 PB Request	FY 2008 PB Request	Change
Education	152.4	153.7	1.3

Change reflects net impact of full-cost simplification and redirecting funding from Education to address higher priority NASA mission requirements.

Theme Purpose

The Education Theme supports multiple Goals and Sub-goals in the 2006 NASA Strategic Plan. Specifically, the Education Theme has the responsibility to deliver on the following outcomes: Outcome ED-1: Contribute to the development of the STEM workforce in disciplines needed to achieve NASA's strategic goals through a portfolio of programs. Outcome ED-2: Attract students and retain them in STEM disciplines through a progression of educational opportunities for students, teachers, and faculty. Outcome ED-3: Build strategic partnerships and linkages between STEM formal and informal education providers that promote STEM literacy and awareness of NASA's mission.

The NASA Strategic Plan Education outcomes are mapped onto the Education Strategic Portfolio Framework and are embedded in four categories of involvement: inspire, engage, educate and employ. The strategic framework will guide the planning, implementation, assessment and validation of the portfolio of programs: E-Education, Elementary and Secondary Education, Higher Education, Informal Education and Minority University Research and Education Program, toward achievement of the Outcomes.

Mission Directorate:	Cross-Agency Support Programs
Theme:	Education Theme

Theme Overview

NASA's journeys into air and space deepen the understanding of the universe, advance technology breakthroughs, enhance air travel safety and security, and expand frontiers of scientific research. These achievements share a common genesis: Education. NASA will continue the tradition of investing in Education programs and supporting Educators who play a key role in preparing, inspiring, exciting, encouraging, and nurturing the youth who will manage and lead the laboratories and research centers of tomorrow. NASA will pursue three major goals: 1) Strengthen the Nation's future workforce--NASA will identify and develop the critical skills and capabilities needed to achieve the Vision for Space Exploration. To meet this demand, NASA will contribute to the development of the Nation's science, technology, engineering, and mathematics (STEM) workforce through a diverse portfolio of Education initiatives for America's students at all levels, especially those in traditionally underserved and underrepresented communities. 2) Attract students and retain them in STEM disciplines--To compete effectively for the minds, imaginations and career ambitions of America's young people, NASA will focus on engaging and retaining students in STEM Education programs and encourage pursuit of educational disciplines critical to the NASA engineering, scientific, and technical missions. 3) Engage Americans in NASA's mission--NASA will build strategic partnerships and linkages between STEM formal and informal education providers. Through hands-on, interactive, educational activities, NASA will engage students, educators, families, the general public, and all Agency stakeholders to increase Americans' science and technology literacy. As the United States begins the second century of flight, NASA will maintain its commitment to excellence in STEM Education to ensure the next generation of Americans accept the full measure of their role and responsibility for shaping the future.

Relevance

Relevance to national priorities, relevant fields, and customer needs:

The Nation maintains its commitment to excellence in science, technology, engineering, and mathematics (STEM) education to ensure the next generation of explorers and innovators is fully prepared to join the workforce while contributing to national needs. The May 2005 National Academies report, "Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future," proposes four broad recommendations to enhance the science and technology enterprise so that the United States can successfully compete, prosper, and be secure in the global community of the 21st century: 1) increase America's talent pool by vastly improving K-12 science and mathematics education; 2) sustain and strengthen the Nation's traditional commitment to long-term basic research; 3) make the United States the most attractive setting in which to study and perform research; and 4) ensure that the United States is the premiere place in the world to innovate. NASA is taking a leading role to inspire interest in STEM, as few other organizations can through its unique mission, workforce, facilities, research and innovations. The Agency is also taking a leading role to make significant impacts in engaging underserved and underrepresented communities in STEM.

Relevance to the NASA Mission:

The NASA Education Strategic Coordination Framework was approved by the Strategic Management Council on February 23, 2006. It was adopted as the framework for NASA education programs, projects, products and activities by the Education Coordinating Committee on February 24, 2006. The Framework assures that all education investments are aligned with the NASA Strategic Plan.

Relevance to education and public benefits:

As NASA implements the Vision of Space Exploration, which will carry humans back to the Moon, on to Mars, and beyond, NASA Education is working to lay the groundwork that will make this ongoing journey possible. The Vision calls for a program of exploration that will continue for decades, requiring the dedication and ingenuity not only of the scientists and engineers of today but of generations to come. To ensure those future explorers will be ready to continue the journey, NASA is working with one of its most vital partners--educators. The Office of Education will promote education as an integral component of every major NASA research and development mission. NASA along with industry and university engineers and scientists, will share knowledge and experience with students and educators as they study Earth and the universe using the latest aerospace research methods.

Mission Directorate:	Cross-Agency Support Programs
Theme:	Education Theme

Performance Commitment

Performance Measure #	Description	Contributing Program (s)
Strategic Goal	Supports Multiple Agency Goals	
Outcome ED-1	**Contribute to the development of the Science, Technology, Engineering and Math (STEM) workforce in disciplines needed to achieve NASA's strategic goals, through a portfolio of programs.**	
APG 8ED01	Provide 100 NASA-supported courses offered at institutions of higher education targeted at the STEM skills needed by NASA.	Education
APG 8ED02	Serve 250 students, 150 faculty, and 40 institutions in designated EPSCoR states.	Education
APG 8ED03	Support 125 Minority Institutions and 4,500 underserved students in STEM education programs.	Education
Outcome ED-2	**Attract and retain students in STEM disciplines through a progression of educational opportunities for students, teachers and faculty.**	
APG 8ED04	Increase by 5 percent the number of elementary and secondary student participants in NASA instructional and enrichment activities.	Education
APG 8ED05	Increase by 5 percent elementary and secondary educators' use of NASA resources in their classroom instruction.	Education
Outcome ED-3	**Build strategic partnerships and linkages between STEM formal and informal education providers that promote STEM literacy and awareness of NASA's mission.**	
APG 8ED06	Provide support to 100 museums and science centers across the country to actively engage the public in NASA events and activities.	Education

Performance Achievement Highlights

E-Education

NASA unveiled its new Kids' Club web site that features animated educational activities for children in grades K-4. Twelve visually impaired/blind high school students participated in an innovative program called Rocket On! made possible through a partnership between NASA & the National Federation of the Blind. The students developed & built sensors to measure acceleration, temperature, pressure & roll rate for a payload on a rocket to be launched. They calculated rocket performance & trajectory using MathTrax, an accessible math tool developed by the NASA Learning Technologies Project.

This year, NASA broadened its use of sports figures in NASA Brain Bites to draw analogies between the world of sports & physics or operations of space flight, including a series of educational videos hosted by Olympic athletes.

Elementary & Secondary Education

The NASA Explorer Schools Program added 33 schools to the existing 218 schools and was recognized as one of the Top 50 Government Innovations for 2006 by the Ash Institute. Recently selected new schools include Cottonwood Day School and Sanders Middle School, located on the Arizona Navajo Reservation.

The Science, Engineering, Mathematics Aerospace Academy (SEMAA) project continued pioneering the development of aerospace-themed schools to actively inspire, engage and education students through hands-on activities and materials that encompass the research and technology of the NASA Mission Directorates. Eight schools (4 high schools, 2 middle schools & 2 elementary schools) were designated as NASA aerospace-themed academies. Educator Astronaut Program graduated 3 astronaut candidates from the 2004 class.

Mission Directorate:	Cross-Agency Support Programs
Theme:	Education Theme

Performance Achievement Highlights

Higher Education

NASA JPL hosted 11 students representing seven Space Grant Consortia for 10 weeks as they developed an initial mission design for "Inspiration," a small Lander that will travel to Mars with the Astrobiology Field Laboratory. Higher Education program conducted NASA Pre-Service Teacher Institutes which sponsor workshops, field trips and tours of NASA Field Centers designed to provide college students who are preparing to become K-8 educators with in-depth and intensive learning experiences that raise comprehension of and interest in STEM-related topics.

The Reduced Gravity Student Flight Program allows teams of undergraduate science and engineering students to propose, design and fly a reduced-gravity experiment. Teams are investigating the effect of microgravity on the human body, fluids, inflatable structures, metals, and lasers. The teams included more than 2,000 undergraduate students from 146 universities, 81 students from 9 community colleges and 446 high school students from 73 schools.

Informal Education

NASA and Honeywell launched the 2006 tour of the award-winning FMA Live! (Force=Mass x Acceleration) the innovative, traveling hip-hop science concert reached nearly 20,000 students in 45 schools during its 14-week, 27-city tour across the United States.

NASA and the Girl Scouts of America are partners in groundbreaking efforts to inspire young women to pursue STEM careers. This summer, Girl Scouts across the Nation were invited to participate in STS-115 launch-day activities on site at NASA Field Centers and at the launch site at NASA Kennedy Space Center.

In July 2006, sixth-through-eighth graders successfully completed the 2-week Bernard Harris Summer Science Camp, which was made available in partnership with NASA and Exxon Mobile (Bernard Harris is the first African-American astronaut to walk in space).

Minority University Research and Education Program (MUREP)

NASA hosted faculty/student research teams from 14 of the Nation's 35 Tribal Colleges & Universities (TCU) assigning participants to research and engineering teams working on robotics, 3-D design, geospatial data analysis and astrobiology. Fifty-seven TCU faculty/students performed research at seven NASA Field Centers.

The Harriett G. Jenkins Predoctoral Fellowship Program produced 21 Ph.D and 33 M.S. Degree recipients in a STEM discipline. From this pool, NASA added five of the former JPFP participants to its workforce. The aerospace industry hired eight Jenkins Fellows graduates.

NASA selected a consortium of three organizations to administer the Motivating Undergraduates in Science and Technology (MUST) Project: Hispanic College Fund, United Negro College Fund Special Program Corporation, and Society of Hispanic Professional Engineers. MUST will identify and develop critical skills and capabilities needed to achieve future missions.

Quality

Performance Measure #	Description
Education Theme Theme	
APG 8ED07	Reduce turn around time by 10% from submission of supplementary curriculum products for formal review to online distribution.
APG 8ED08	Reduce the cost per program participant by 5%.

Program Assessment Rating Tool (PART):

NASA's Education Program received a FY2004 PART rating of "Adequate". Many positive attributes were cited and it was concluded that the program attracts students to science & technology careers at NASA. On the other hand, it was cited that NASA lacked complete data on the effectiveness of its education programs. The program was unaware of the degree to which participants had taken jobs with NASA or related fields. The program did not report on a complete set of performance measures that reflected the desired program outcomes. Specifically, the Office of Education was assigned several program improvements actions:

1) Perform regular program reviews to ensure that only effective, relevant programs are funded.
2) Report accomplishments annually and make the data available to the public.
3) Perform self-evaluations, including solicitation of student feedback and collections of longitudinal data on student career paths.
4) Fill NASA´s workforce needs by a stronger effort to consider eligible program participants and facilitate their job entry.
5) Develop appropriate performance measures, baselines, and targets.

Education increased attention to strategic planning and performance measurement to better define expected results; identify appropriate measures to document achievements; and ensure that reliable, valid, and comprehensive performance data are collected, analyzed, and reported. Regular reviews are conducted to determine the effectiveness of program components and to eliminate, enhance existing or add missing components to achieving its goals. Effort is being made to link program participation to NASA's workforce requirements and to implement a process to track students.

A new Education Framework was developed, with an implementation plan to support the strategic direction and the Vision for Space Exploration. Outcomes, objectives and measures were developed to support the framework. This will be factored into a PART reassessment in FY2007.

Independent Reviews:

Review Type	Performer	Last Review	Purpose/Outcome	Next Review
Performance	Space Grant Program Management	06/2003	Insure each 52 Space Grant consortia conduct a balanced program of research, education & public service in compliance with legislation, regulations, and NASA program guidance/Outcome of the merit review determines if the grant is continued for 5 years; outcome of the last evaluation (1998-2002): 33 consortia passed; 14 consortia placed on probation with requirement for corrective action plan, 5 consortia did not pass and these 5 consortia were re-established based on a competitive solicitation.	06/2008
All	ECC	02/2006	The Education Coordinating Committee (ECC) conducted a portfolio review of all NASA education investments. The review resulted in an inventory of investments, with projects categorized by type to enable further analysis. The review also developed a refined set of program objectives and corresponding measures.	TBD
Quality	National Research Council	06/2006	In FY 06 the NRC Board on Science Education began work under a contract with NASA to conduct an evaluation of NASA's pre-college education program. An expert panel was convened and the first committee meeting was held Nov. 15-17, 2006. Three additional committee meetings will be held prior to the submission of the NRC's report, scheduled for November, 2007. The NRC does not release preliminary results prior to submission of their report.	02/2008
All	NEPER and Westat	08/2001	OMB directed an external evaluation of NASA Education Program. The NASA Education Program Evaluation Review (NEPER) Panel concluded that NASA possesses a unique opportunity to use its facilities and personnel to enrich the education pipeline, K-12 through the Ph.D degree, in order to contribute to ameliorating the Nation's projected workforce shortage in science and engineering. The panel believes it takes a community to build a strong and effective national STEM program.	TBD

Mission Directorate:	Cross-Agency Support Programs
Theme:	Education Theme
Program:	Education

Program Budget

Budget Authority ($ millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Education	162.4	167.4	153.7	152.8	152.7	149.8	149.6

Note: FY 2007 column represents the 2007 President's Budget in full-cost simplification.

Highlights of Major Program Changes

Program Title:	FY 2008		
	FY 2007 PB Request	FY 2008 PB Request	Change
Education	152.4	153.7	1.3

Change reflects net impact of full-cost simplification and redirecting funding from Education to address higher priority NASA mission requirements.

Program Overview

NASA's journeys into air and space deepen the understanding of the universe, advance technology breakthroughs, enhance air travel safety and security, and expand frontiers of scientific research. These achievements share a common genesis: Education. NASA will continue the tradition of investing in education and supporting educators who play a key role in preparing, inspiring, exciting, encouraging, and nurturing the youth who will manage and lead the laboratories and research centers of tomorrow. NASA will pursue three major goals: 1) Strengthen the Nation's future workforce--NASA will identify and develop the critical skills and capabilities needed to achieve the Vision for Space Exploration. To meet this demand, NASA will contribute to the development of the Nation's science, technology, engineering, and mathematics (STEM) workforce through a diverse portfolio of education initiatives for America's students at all levels, especially those in traditionally underserved and underrepresented communities. 2) Attract students and retain them in STEM disciplines--To compete effectively for the minds, imaginations and career ambitions of America's young people, NASA will focus on engaging and retaining students in STEM education and encourage pursuit of educational disciplines critical to the NASA engineering, scientific, and technical missions. 3) Engage Americans in NASA's mission--NASA will build strategic partnerships and linkages between STEM formal and informal education providers. Through hands-on, interactive, educational activities, NASA will engage students, educators, families, the general public, and all Agency stakeholders to increase Americans' science and technology literacy. As the United States begins the second century of flight, NASA will maintain its commitment to excellence in STEM education to ensure the next generation of Americans accept the full measure of their role and responsibility for shaping the future.

Plans For FY 2008

The Education Program will use re-aligned and restructured projects to focus and accelerate products and services to meet NASA Strategic Goals ED-1, ED-2, & ED-3.

The Higher Education and MUREP Projects will continue to facilitate these efforts through competitive NASA Research Announcements (NRA), Cooperative Agreement Notices (CANs), and other procurement vehicles, and multi-year grants awarded to institutions, faculty, and students in Agency-relevant research. These projects will continue to focus on strengthening the academic and research infrastructure of Minority Institutions (MI) and attracting and preparing students in STEM disciplines, and support their completion of undergraduate and graduate degrees with the ultimate goal of providing access to careers in NASA and the Nation's scientific and technical workforce.

NASA Elementary and Secondary Education Project will continue to implement a systemic restructuring of budgets to realize efficiencies, cost savings and reallocation. A business model that includes cost-sharing, sunrise-sunset provisions to funded projects, and insertion of standard processes, tools, and reporting will continue to be implemented. The realignment of projects to the Centers beginning late FY 2006 will necessitate adjustments to management processes and interface mechanisms throughout FY 2007 and FY 2008.

The E-Education Project will sustain the following efforts in FY 2008: implementation of studies to address key E-Education research questions & technical requirements and the chronology of the R&D roadmap for the next 3-5 years; pursue partnerships; leverage technology infrastructures to deliver exploration related content; implement a meta-tagging process for the Education Program to enhance access to NASA multi-media content; identify assessment results that prove benefit to targeted audiences.

The Informal Education Project will focus on its priority initiative, NASA Explorer Institutes (NEI). Four categories of NEI projects will be considered for funding in FY 2008 including: Professional Development Workshop Opportunities; STEM Teaching Tools and Products; Infrastructure Development Projects; and Partnerships for Sustainability.

Mission Directorate:	Cross-Agency Support Programs
Theme:	Education Theme
Program:	Education

Project Descriptions

There are 5 projects in the Education Program:

Higher Education Project focuses on supporting institutions of higher education in strengthening their research capabilities and providing opportunities that attract and prepare increasing numbers of students for NASA-related careers. The research conducted by the institutions will contribute to the research needs of NASA's Mission Directorates. The student projects serve as a major link in the student pipeline helping to "build, sustain, and effectively deploy the skilled, knowledgeable, diverse, and high performing workforce needed to meet the current and emerging needs of government and its citizens."

Minority University Research and Education Project engages under-represented populations through a wide variety of initiatives. Multi-year grants are awarded to engage minority institutions, faculty and students in research pertinent to NASA missions. The project focuses on retaining underrepresented and underserved students in a STEM discipline through completion of undergraduate or graduate degrees and entry into the scientific and technical workforce.

Elementary and Secondary Education Project provides K-12 educators with tools, experiences, and opportunities to further their education and participate in unique NASA learning experiences to enhance their knowledge of STEM and inspire pursuit of STEM careers. The project supports the role of educational institutions, which provide the framework to unite students, families, and educators for educational improvement.

The E-Education Project sustains the research and development of technology applications, products, services and implementation of technology-enriched infrastructure in facilitating the appropriate and effective technology-based applications to enhance the educational process for formal and informal education.

Informal Education Project intends to increase learning, to educate students, educators and the general public on specific science, technology, engineering or math (STEM) content areas, and to expand the nation's future STEM workforce. The project provides supplemental educational materials/handouts that are standards based, support staff/facilitators, trained or qualified in STEM/education fields, actively working with participants to further enhance their understanding, and develop content based on educational standards and/or learning objectives to supplement and enrich an experience, visual, or activity.

Higher Education Project

The Higher Education Project has the following four subprojects:

The Experimental Program to Stimulate Competitive Research (EPSCOR) effort aims to strengthen the long-term self sustainability of academic research enterprises by supporting states with modest research infrastructure to become more competitive in attracting research funding. Funding is awarded to lead academic institutions in 25 jurisdictions to foster a STEM relationship with NASA and industry for research and development opportunities.

Space Grant, a national network of colleges and universities, works to expand opportunities for students and faculty to understand and participate in NASA's aeronautics and space programs by supporting and enhancing engineering and science education, research, and workforce development and informal education through student scholarships, graduate fellowships, and hands-on experiences at NASA Centers and academic institutions.

The Undergraduate Student Researchers Project (USRP) attracts undergraduate students from the widest array of backgrounds, who are fully representative of America's racial, ethnic, and cultural diversity; and provides them with hands-on, challenging research experiences that stimulate continued student interest in the fields/disciplines aligned with NASA's Mission.

The Graduate Student Researchers Project (GSRP) cultivates research ties to the academic community to help meet the continuing needs of the Nation's aeronautics and space effort by increasing the number of highly trained scientists and engineers in aeronautics and space-related disciplines, and broadening the base of students pursuing advanced degrees in science, mathematics, and engineering. NASA awards fellowships for graduate study leading to masters or doctoral degrees in the fields of science, mathematics, and engineering related to NASA research and development.

Minority University Research & Education Project (MUREP)

MUREP subprojects address the following federal mandates: Executive Orders 13256, 13230, and 13270.

University Research Centers (URCs) provide a broad-based, competitive NASA-related research capability among the Nation's Minority Institutions (MI) that foster new aerospace science and technology concepts; expand the Nation's base for aerospace research and development; develop mechanisms for increased participation by faculty and students in mainstream research; and increase the production of US citizens who have historically been underrepresented and in obtaining advanced degrees in STEM disciplines.

Tribal Colleges & Universities (TCUs) increase student and faculty involvement in the excitement of space exploration and cutting-edge technologies. Partnerships with NASA enhance the capacity of TCUs to compete for federal grants and other resources, and provides high-quality educational opportunities to Native American students and faculty.

Motivating Undergraduates in Science & Technology (MUST) provides one-year scholarships and internships at a NASA center to rising freshmen, sophomores, juniors, or transfer students. Open to all eligible students, the overall purpose is to provide outreach to underrepresented and underserved US citizens, enrolled in STEM disciplines.

Curriculum Improvement Partnership Award for Integration of Research (CIPAIR) is a workforce development three-year undergraduate curriculum improvement effort to strengthen the educational experience by integrating cutting-edge NASA-related research into the undergraduate STEM curriculum and to strengthen teaching and research strategies and collaboration across academic programs.

NASA Science & Technology Institute - Minority Institutions (NSTI-MI) is a joint venture which brings together the expertise of MIs and the NASA centers to provide research opportunities and improve transfer of information, ideas, and technology.

Jenkins Postdoctoral Fellowship Project (JPFP) provides support for underrepresented and underserved students in STEM disciplines, including women, minorities, and those with disabilities who seek advanced degrees and opportunities for NASA-related research.

Faculty Awards for Research (FAR) provides faculty at MIs with an opportunity early in their academic careers, to integrate the research & education components with unique mission requirements of NASA centers.

The NASA Administrator's Fellowship Project (NAFP) seeks to increase the ability of MIs to respond to NASA's overall research and development mission. NASA employees spend a year as visiting faculty/administrators at MIs and members of MI STEM faculty spend a year conducting research at a NASA center.

Small Projects support opportunities for students, teachers, faculty, and researchers in NASA related STEM fields.

Elementary & Secondary (E&S) Education Project

E&S Education Project integrates new components with existing NASA assets into a structure that supports local education efforts to encourage student involvement in STEM. There are six subprojects:

Interdisciplinary National Science Program Incorporating Research & Education (INSPIRE) effort is intended to become a multi-tiered pipeline program designed to bridge students' STEM education experiences for pre-college and post-secondary students.

NASA Explorer Schools (NES) establishes a three-year partnership between NASA and school teams, consisting of teachers and education administrators from diverse communities across the country. The project is designed for education communities at the fourth through nineth grade levels.

Science Engineering, Mathematics & Aerospace Academy (SEMAA) is a national project designed specifically to reach K-12 minority students that are traditionally underrepresented in careers involving STEM. Students meet during school, after school or on Saturday mornings, and during the summer to engage in hands-on, interactive learning sessions that are specifically designed for each grade level.

Aerospace Education Services Project (AESP) is a professional development program that serves the elementary and secondary education community by providing classroom demonstrations, faculty workshops, parent training, in-service training for teachers, and identification of appropriate classroom resources.

Education Flight Projects provide opportunities for K-12 students to gain hands-on experience as payload investigators using NASA flight platforms such as the Space Shuttle, the International Space Station (ISS), sounding rockets, and scientific balloons.

E-Education Project

E-Education has the following four sub-projects:

NASA Learning Technologies (NLT) develops and refines leading-edge or cutting-edge technologies that are in use within NASA missions and/or projects to enhance the teaching and learning of scientific concepts. Technologies funded under NTP are incubated and developed, evaluated, and leveraged with strategic partners to extend reach into educational and commercial applications.

Classroom of the Future (COTF) conducts empirical educational research then develops and tests off-the-shelf and new or evolving educational technologies that incorporate research findings on cognition and effective application of technology to educational settings. The educational technologies tested and/or developed use NASA research, datasets, or subject

NASA Educational Technology Services (NETS) support the publishing and is responsible for maintaining the educational content on the NASA Portal and managing the operation of the Office of Education Web site and other electronic-based dissemination networks. Additional Web support is provided in the identification and linkage of multimedia resources to support the education video file (education programming) on the NASA TV Public Services channel and NASA TV Education Services channel.

E-Education Small Projects develop infrastructure and deploy research-based technology applications, products, and services to enhance the educational process for formal and informal education. An emphasis is implementation of educational product development, review, and metatagging processes and final distribution through approved media, electronic, and/or site-based channels.

Informal Education Project

NASA's Office of Education, Office of Public Affairs, Mission Directorates, and the Centers all work together to develop partnerships and activities that enhance the capabilities of Informal Education community to inspire the next generation of explorers by providing access to NASA staff, research, technology, information, and facilities. Informal Education activities are on-going and are structured to leverage targets of opportunity.

The Informal Education project currently has one subproject, the NASA Explorer Institutes (NEI). The goal of the NASA Explorer Institutes effort is to encourage and support activities that do the following: improve public understanding and appreciation of STEM disciplines to enhance their scientific and technological literacy, mathematical competence, problem-solving skills, and desire to learn; establish linkages that promote new relationships between providers of informal and formal education resulting in improved and creative STEM education in all learning environments; excite youth, particularly those who are underrepresented and underserved about STEM disciplines; expand STEM informal education programs and activities to communities/locations that have been traditionally underserved by such opportunities; stimulate parents and others to support their children's learning endeavors in formal and informal settings and become informed proponents for high-quality, universally available STEM education in the home and elsewhere; and encourage and implement innovative strategies that support development of a socially responsible and informed public who can make responsible decisions about STEM policy issues affecting their everyday lives.

Mission Directorate:	Cross-Agency Support Programs
Theme:	Education Theme
Program:	Education

Program Commitments

Commitment/Output	Program/Project	FY 2007 PB Request	FY 2008 PB Request
Enable eligible jurisdictions to compete successfully for NASA research & technology opportunities	Experimental Project to Stimulate Competitive Research (EPSCoR)	$10.0M	$10.0M
Promote a network of state-based consortia to promote NASA's interests throughout the country	National Space Grant College and Fellowship Project (Space Grant)	$28.8M	$29.0M
Place undergraduate students at NASA centers for 10-week internship or 15-week semester internship	Undergraduate Student Research Project (USRP)	$3.7M	$3.7M
Support graduate students pursuing master or doctoral degrees in disciplines relevant to NASA	Graduate Student Researchers Project (GSRP)	$8.7M	$7.0M
Achieve broad-based competitive aerospace research capability among the Nation's minority instit.	University Research Centers (URCs)	$18.2M	$14.7M
Produce leadership for building capacity at MIs and prepare students to compete in STEM workforce	NASA Science and Technology Institute for Minority Institutions (NSTI-MI)	$1.2M	$1.1M
Respond to need of 2 & 4 year minority institutions to strengthen STEM curricula related to NASA	Curriculum Improvement Partnership Award for Integration of Research (CIPAIR)	$2.5M	$2.5M
Enhance professional development of NASA employees and STEM faculty of minority service institutions	NASA Administrator's Fellowship Project (NAFP)	$2.5M	$2.5M
Train students with disabilities and underrepresented/underserved 6-16 students through MSI	Small Projects	$0.2M	$1.5M
Create opportunity for minority, women, & individuals with disabilities to pursue graduate education	Harriet G. Jenkins Predoctoral Fellowship Project (JPFP)	$2.6M	$2.6M
Enhance the education infrastructure at the Nation's 35 Tribal Colleges and Universities	Tribal Colleges (TCUs)	$1.9M	$1.7M
Plan for 100 undergraduates across nine centers and JPL	Motivating Undergraduates in Science & Technology (MUST)	$0.0	$1.9M
Provide faculty of minority institutions opportunity to engage in research pertinent to NASA mission	Faculty Awards for Research (FAR)	$1.8M	$4.4M
Technical direction for 24 SEMAA sites, host student tours/presentations, and national conference	Science, Engineering, Mathematics & Aerospace Academy (SEMAA)	$4.2M	$4.0M

Nationwide infrastructure for customized professional development	Aerospace Education Services Project (AESP)	$6.3M	$5.3M
National education efforts tied to space exploration activities	NASA Educator Astronaut (NEA)	$2.9M	$2.7M
STEM pathways for eligible U.S. citizens with emphasis on underrepresented & underserved groups	Interdisciplinary National Science Project Incorporating Research & Education Experience (INSPIRE)	$3.9M	$3.7M
Adjustment of management processes and interface mechanisms to complete project realignment effort	Education Flight Projects	$2.0M	$1.1M
Serve schools in every state and add up to 50 new teams	NASA Explorer Schools (NES)	$14.1M	$12.3M
Advance technologies that support well-educated and highly skilled workforce	NASA Learning Technologies (NLT)	$2.9M	$1.9M
Implement additional options for accessing Web-based learning services from the Education Portal	NASA Educational Technology Services (NETS)	$1.9M	$1.4M
Finalize tasks to extend reach of NASA education products and delivery to targeted NASA staff	E-Education Small Projects	$1.7M	$0.6M
Evaluate new technologies available commercially for applications in educational environments	NASA-sponsored Classroom of the Future (COTF)	$2.0M	$2.1M
Partnerships/alliances for students/citizens to become participants in NASA R&T and Space Exploratio	NASA Explorer Institutes (NEI)	$2.4M	$1.7M

Program Management

Program Management is the responsibility of the Assistant Administrator for Education and is conducted in accordance with NASA policies and procedures.

Project	Oversight	Lead Performer	Partners
Higher Education Project	NASA HQ Office of Education	NASA HQ, NASA Centers, External Grant Awardees	Fifty-two university-based Space Grant Consortia in all 50 states, Puerto Rico and District of Columbia require 100 percent matching funds on non-fellowship awards. Twenty-five selected juristictions and a total of seven federal agencies.
Minority University Research and Education Project	NASA HQ Office of Education	NASA Centers, External Grant Awardees	
Elementary & Secondary Education Project	NASA HQ Office of Education	NASA Centers, NASSMC, NSTA, U.S. Space & Rocket Cntr, OSU, STEM Stakeholders, External Grant Awardee	Educational organizations and institutions provide professional development opportunities and in-kind contributions to NES schools; OSU; Network of Educator Astronaut Teachers, AOL, Univ CA-San Diego, AMSAT, ARISS International Team
E-Education Project	NASA HQ Office of Education	NASA Centers, External Grant Awardees, UNITeS Contract	NSF, Dept. of Education, DoD, Dept. of Energy, Office Max, Lorain, County Joint Vocational School
Informal Education Project	NASA HQ Office of Education	JPL, NASA Centers, external grant awardee	Arizona State University and ArtReach International, AMES-The Navajo Nation; National Park Service, University of California -Berkeley, and Ideum, GSFC; College of Charleston, S.C., U.S. Space and Rocket Center, Ala.; Girl Scouts U.S.A.; Houston Museum of Natural Science, Rice University and Starlight Productions, JSC; Denver Museum of Nature and Science; Morehead Planetarium and Science Center; University of Alabama-Huntsville, National Association of Rocketry, and 4-H; Lunar Planetary Institute, Texas, Haltom City Public Library, Texas, and Librarians from Pennsylvania, Delaware and Maryland; and American Musueum of National History, Over 200 Museums.

Acquisition Strategy

The Education Program will continue to facilitate its programs and projects through competitive NASA research announcements, cooperative agreement notices and other procurement vehicles, and multi-year competitive grant awards to institutions, faculty and students in Agency-relevant research.

Mission Directorate:	Cross-Agency Support Programs
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Program Risk Management

Title	Risk Statement	Risk Management Approach and Plan
Affiliation Risk	The primary risk is loss of affiliation with students, teachers, faculty, education administrators, and institutions at all educational levels resulting in an inability to meet NASA and the Nation's future workforce needs in scientific and technical disciplines.	Education Program will monitor and mitigate program & project risks through continual evaluation of program & project performance and relevance, adjusting the portfolio to ensure an appropriate mix.