

FY 2010 Visitor Center Funds
Administered by
Johnson Space Center
In collaboration with
Space Center Houston
(Also known as Manned Space Flight Education Foundation, Inc.)
Report for Grant number - **NNX10AL67G**
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PROJECT DESCRIPTION

The Visitor Center project 2010 was a collaborative effort between the education departments of Johnson Space Center and Space Center Houston. The partnership entailed developing education activities, including exhibits, events and materials, that address one or more of the NASA Education outcomes and create a strategic alliance among all NASA Center Education and Visitor Centers that will outlast the funding.

The following were Space Center Houston's project contributions to this collaboration:

1. To facilitate professional development internally and externally that will allow educators to become familiar with best practices in teaching space science.
2. To encourage collaboration and sharing of educational activities between NASA's JSC community and its partners.
3. To enhance and upgrade traveling and permanent exhibits so that they directly connect guests with the vision of NASA.
4. To upgrade Space Center Houston's existing programs so that school aged children and youth will be inspired by space science.

Space Center Houston, the official visitor's center for Johnson Space Center collaborated with JSC on a grant to fulfill three objectives:

1. Strengthening NASA and the nation's future workforce.
2. Attract and retain students to STEM
3. Engage Americans in NASA's mission

PROJECT BENEFIT TO OUTCOME

NASA's Objectives

(Objective #1) Education events based on NASA education framework	(Objective #2) The number of new or upgraded exhibits, or products based on NASA's mission, is 51.	(Objective #3) Sustain and refresh existing NASA education communities
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- a. To facilitate professional development internally and externally that will allow educators to become familiar with best practices in teaching space science.

(Outcome #1)

- Space Exploration Educators Conference (SEEC)
- Association of Science and Technology Centers (ASTC)
- Space Science For Education Staff (TBD)
- Boy Scouts of America 100th Anniversary Jamboree

Progress:

- The 17th annual SEEC, scheduled for February 3-5, 2011, is currently under development with on line registration and session descriptions available. It will reach approximately 1000 educators. This conference of hands-on training facilitated by NASA engineers, astronauts and science educators will provide teachers with current teaching tips and best practices.
- The Education Director and a Senior Education Assistant attended the ASTC conference in October 2010. The Senior Program Assistant presented content during several sessions of the conference.
- Space Science for Education Staff is still in the works; however, funding was used to hire a vendor to train the space school staff on cross-cultural interactions. Twenty Space Center Houston education staff will attend the intercultural relationship training offered by Lynn Witham of Witham Associates.
- Boy Scouts of America, Incorporated 100th Anniversary Jamboree. Two staff members attended this conference to further their understanding and awareness of current practices that are aligned with the facility's and department's mission.

- b. To provide new and uniquely NASA related STEM education opportunities.

(Outcome #2)

- Summer of Innovation
- *New Education Stage and Exhibit*
- Astronaut Interaction Activities
- Account Manager for School Groups
- Semester in Space

Progress:

- Summer of Innovation engaged approximately 1,000 school aged children in science, technology, engineering and mathematics through special programs as well as grant sponsored field trips held at Space Center Houston. The field trips exposed middle school students to NASA's Johnson Space Center's artifacts and activities.
- The Education Stage/Exhibit was designed and installed in order to educate visitors on the current NASA activities, while integrating NASA content. The theatrical performances use multimedia to share accomplishments of NASA.

- Astronaut Interaction Activities are held weekly to allow guests to hear presentations from astronauts, as well as ask questions. The astronauts present at least two presentations to guests upon each visit.
 - Account Manager for School groups – There is currently a search for an Account Manager to inspire school groups to attend field trips at Space Center Houston.
 - Semester in Space is a program designed to teach space science to underachieving middle school learners throughout the school year. The students are provided an immersive experience on space concepts at Space Center Houston. All surrounding Clear Creek Independent School District middle schools currently participate in this program, totaling 8 middle schools.
- c. To upgrade Space Center Houston’s existing programs so that school-aged children and youth will be inspired by space science. **(Outcome #2)**
- Continuation of Outer Space Academy upgrade to include secondary curriculum and current NASA mission.
 - Space Center Houston Education Webpage upgrades
 - Account Manager for School Groups
 - International Space Station exhibit or educational component
 - Educator Resource Center Assistant (part time)

Progress:

- Outer Space Academy is being enhanced by curriculum developers to include hands-on experiments for secondary students in addition to its current base of elementary and middle school students. Advanced students from University of Houston-Clear Lake are developing Physics content for this program as curriculum consultants.
- Space Center Houston’s education webpage is under development so that it will become more user-friendly to site visitors. A Houston area website development firm has presented a framework for the website for education.
- The International Space Station focus that SCH is pursuing is a program that involves youth from each country represented on the ISS to meet at Space Center Houston to collaborate and develop innovative ideas for the future.
- The Educator Resource Center’s (ERC) part time position has been filled and is working to assist the present ERC Specialist with daily duties and requirements.

Budget Table for FY2010 VCF

Activity	Original funding	Product of Service Provided	% complete	Remaining \$\$	other
Summer of Innovation Initiatives	\$60,000	Sponsored summer science course and student admissions to	80%	\$12,000	

		SCH, as well as Back-to-school event for SOI participants and partners.			
Semester in Space	\$35,000	Curriculum development and student course fees	51%	\$17,000	\$12,000 for curriculum development, staff training, and program supplies has been used. Additionally, \$6,000 was pending for program outreach.
Education Stage and Exhibit build	\$135,000	Stage build & Equipment	25%	\$101,250	See proposal for specific data description
Outer Space Academy	\$10,500	SCH curriculum Contracted curriculum consumables	50%	\$5,250	See proposal for specific data description
SCH Education Webpage upgrade	\$15,000	Website development firm has developed and presented plans.	25%	\$11,250	Firm presented data and a new format to display education content on website.
Space Science Prof. Development for Education Staff	\$10,000	Space Science Cross Cultural relationships & Conference attendance	60%	\$4,000	
SEEC	\$95,000	Equip Rental Scholarships Conf. items Brochures Admin costs	15%	\$80,750	Event concludes Feb 5, 2011
Astronaut Interaction Activities	\$52,000	Student interactions with Astronauts (weekly)	15%	\$44,000	Opportunities began in October and are scheduled through June, 2011
Account Manager for School Groups	\$57,500	Encourage increased field trips.	0	\$57,500	Search underway
International Space Station Education	\$12,000	Curriculum and supplies for Global Cooperative Challenge program	16%	\$10,000	75% of curriculum developed. Orders for supplies are in progress.
ERC support	\$28,000	Staffing Equipment	25%	\$24,640	Continuation of 2009 support
Total Budget	\$510,000		28%	\$367,640	

*Legend Acronyms:

- SEEC = Space Exploration Educators Conference
- ERC = Educator Resource Center
- SCH = Space Center Houston

Administrative Costs

Dr. Melanie Johnson (Director of Education) and Angela Case (Senior Education Program Assistant) will be responsible for the implementation of the grant. \$2,000 has

gone towards Dr. Melanie Johnson's salary and \$1,000 has gone towards Angela Case's salary. These costs will cover the time spent implementing all aspects of programming as well as budget and grant reporting.

IMPROVEMENTS MADE IN THE PAST YEAR 2009-2010

- Summer of Innovation – Space Center Houston expanded its outreach to students who live and attend school outside of a 30 mile radius to the center.
- Astronaut Interaction Activities – Space Center Houston offered reduced price tickets to students during the initial months of the “Meet an Astronaut program.”
- Account Manager for School Groups – Space Center Houston will provide schools with tangible reasons to participate in educational programs.
- Semester in Space – Space Center Houston has provided scholarships for more than 200 underperforming middle school students in the Clear Creek School district.
- Education Webpage – The education webpage will serve to maintain the relevance of space to the rapidly changing demographics of school age students.

PROJECT PARTNERS AND ROLE OF PARTNERS IN PROJECT EXECUTION

- Summer of Innovation – Space Center Houston plans to provide outreach to students in areas that are distant from space centers through distance learning and mobile exhibits. The remaining funds will be used to support these endeavors.
- Astronaut Interaction Activities– Space Center Houston aspires to increase its school visit attendance and increase its reach to students. Data of attendance during the prior year (before astronaut program) will be compared to school group attendance during the inaugural year of the program.
- Account Manager for School Groups – SCH will measure the program and field trip attendance of prior years to the year of employing an account manager.
- Semester in Space – Each session of Semester in Space presents middle school students with pre- and post tests that are aligned with commonly missed standards for this age group.
- Education Webpage – Increased and repeat activity will be the data collected upon the installation of the new education webpage.

SUMMARY

In summary, Space Center Houston has been able to make commendable progress towards reaching the goals outlined in their FY2010 proposal. While funding was awarded on June 4th, 2010 and was made accessible to Space Center Houston on August 17, 2010, they have spent approximately 28% of the funding provided. Major accomplishments of the partnership between Space Center Houston and the Johnson Space Center include working closely together to support the Agency's Summer of Innovation initiative during the summer of 2010. Through this collaboration, over 1,000 middle school students were engaged during the “Voyage Back to School” STEM celebration event. Another major accomplishment was the development and installation

of the “Education Stage/Exhibit” which was designed to educate visitors on current NASA activities, while integrating NASA content. An upcoming accomplishment will be the 17th annual Space Exploration Educators Conference (SEEC) which is expected to draw in nearly 1000 educators through hands-on professional development activities. It will also provide opportunities for educators to learn about best practices in space science education. The conference is scheduled for February 3-5, 2011.