

# Program Performance Measures<sup>1</sup> - FY 2008

Term	Type																													
Annual	Output	<p><b>Text:</b> Number of new or revised courses targeted at the STEM skills needed by NASA that are developed with NASA support.</p> <p><b>Explanation:</b> These are university-level courses based on the results of NASA's science and space exploration missions. New courses are developed by Space Grant; NASA University Research Centers and MUREP.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Target</th> <th>Actual</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>2006</td> <td>60 Courses</td> <td>110 Courses</td> <td></td> </tr> <tr> <td>2007</td> <td>60 Courses</td> <td>99 Courses</td> <td></td> </tr> <tr> <td>2008</td> <td>60 courses</td> <td></td> <td></td> </tr> <tr> <td>2009</td> <td>60 Courses</td> <td></td> <td></td> </tr> <tr> <td>2010</td> <td>60 Courses</td> <td></td> <td></td> </tr> <tr> <td>2011</td> <td>60 Courses</td> <td></td> <td></td> </tr> </tbody> </table>	Year	Target	Actual	State	2006	60 Courses	110 Courses		2007	60 Courses	99 Courses		2008	60 courses			2009	60 Courses			2010	60 Courses			2011	60 Courses		
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Annual	Output	<p><b>Text:</b> Number of institutions served in designated EPSCoR states.</p> <p><b>Explanation:</b> Twenty-five states participate in NASA's research capacity/capability building program, EPSCoR. Data comprise a non-duplicated count of institutions served by the following programs: EPSCoR, Space Grant, MUREP, and GSRP. Data reflect the states eligible for NASA EPSCoR as determined by the National Science Foundation EPSCoR Program per the NASA EPSCoR legislation.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Target</th> <th>Actual</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>2006</td> <td>132 institutions</td> <td>132 institutions</td> <td></td> </tr> <tr> <td>2007</td> <td>132 institutions</td> <td>200 institutions</td> <td></td> </tr> <tr> <td>2008</td> <td>132 institutions</td> <td></td> <td></td> </tr> <tr> <td>2009</td> <td>132 institutions</td> <td></td> <td></td> </tr> <tr> <td>2010</td> <td>132 institutions</td> <td></td> <td></td> </tr> <tr> <td>2011</td> <td>132 institutions</td> <td></td> <td></td> </tr> </tbody> </table>	Year	Target	Actual	State	2006	132 institutions	132 institutions		2007	132 institutions	200 institutions		2008	132 institutions			2009	132 institutions			2010	132 institutions			2011	132 institutions		
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Annual	Output	<p><b>Text:</b> Number of underrepresented and underserved students participating in NASA education programs.</p> <p><b>Explanation:</b> These graduate and undergraduate students are served by Space Grant and MUREP. Actual number includes students that participate in courses, scholarships, events, travel, lectures and sponsored competitions.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Target</th> <th>Actual</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>2006</td> <td>8,500 students</td> <td>8,500 students</td> <td></td> </tr> <tr> <td>2007</td> <td>8,500 students</td> <td>9,746 students</td> <td></td> </tr> <tr> <td>2008</td> <td>8,500 students</td> <td></td> <td></td> </tr> <tr> <td>2009</td> <td>8,500 students</td> <td></td> <td></td> </tr> </tbody> </table>	Year	Target	Actual	State	2006	8,500 students	8,500 students		2007	8,500 students	9,746 students		2008	8,500 students			2009	8,500 students										
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<sup>1</sup> Out-year targets pending final OMB concurrence. Submitted to OMB 1-4-08.

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Long-term	Output	<p><b>Text:</b> Percentage of elementary and secondary educators using NASA content-based STEM resources in the classroom.</p> <p><b>Explanation:</b> Educators obtain NASA STEM resources in a number of ways such as downloading from the web, obtaining materials from NASA Educator Resource Centers and CORE, and through direct participation in training experiences where materials are demonstrated. Feedback from these educators has been the basis for setting the percentage.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Target</th> <th>Actual</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>2007</td> <td>FY07 actual</td> <td>55%</td> <td></td> </tr> <tr> <td>2008</td> <td>baseline plus 3%</td> <td></td> <td></td> </tr> <tr> <td>2009</td> <td>baseline plus 4%</td> <td></td> <td></td> </tr> <tr> <td>2010</td> <td>baseline plus 5%</td> <td></td> <td></td> </tr> <tr> <td>2011</td> <td>baseline plus 10%</td> <td></td> <td></td> </tr> </tbody> </table>	Year	Target	Actual	State	2007	FY07 actual	55%		2008	baseline plus 3%			2009	baseline plus 4%			2010	baseline plus 5%			2011	baseline plus 10%						
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Annual	Output	<p><b>Text:</b> Number of museums and science centers across the country that actively engage the public in major NASA events.</p> <p><b>Explanation:</b> The 350 number includes members from the NASA Museum Alliance (MA), Space Place Network (includes partners in every state e.g. community museums, libraries, planetariums, zoos and aquariums) the Smithsonian, NASA Visitor Centers, earmark recipients and Office of Education special projects (e.g. major events by the NASA Office of Communications Planning that engage the public in selected major NASA events). NASA's budget request reflects a reduction each year through FY 11. NASA's objective is to continue serving the same number of participants, despite these funding reductions, through achievement of efficiencies.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Target</th> <th>Actual</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>2006</td> <td>350 museums</td> <td>350 museums</td> <td></td> </tr> <tr> <td>2007</td> <td>350 museums</td> <td>350 museums</td> <td></td> </tr> <tr> <td>2008</td> <td>350 museums</td> <td></td> <td></td> </tr> <tr> <td>2009</td> <td>350 museums</td> <td></td> <td></td> </tr> <tr> <td>2010</td> <td>350 museums</td> <td></td> <td></td> </tr> <tr> <td>2011</td> <td>350 museums</td> <td></td> <td></td> </tr> </tbody> </table>	Year	Target	Actual	State	2006	350 museums	350 museums		2007	350 museums	350 museums		2008	350 museums			2009	350 museums			2010	350 museums			2011	350 museums		
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Long-term	Outcome	<p><b>Text:</b> Percentage of student participants employed by NASA, aerospace contractors, universities, &amp; other educational institutions.</p> <p><b>Explanation:</b> Baseline includes national higher education and MUREP projects within the Office of Education Portfolio, and is limited to students who have received scholarships, fellowships or stipends totaling &gt;\$5K or internships of at least 160 hours. Responses are self-reported from students who have completed terminal degrees in the NASA pipeline including Space Grants, GSRP, Jenkins, and Pre-Service teachers. Future enhancements will include standardized tracking and surveys across all national higher education projects.</p>																												

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Long-term	Outcome	<p><b>Text:</b> Percentage of undergraduate students who move on to advanced education in NASA-related disciplines.</p> <p><b>Explanation:</b> Data includes students as reported by Space Grant, and is limited to students who have received scholarships, fellowships or stipends totaling &gt;\$5K or internships of at least 160 hours. Responses are reported by national space grant directors. Future enhancements will include standardized tracking and surveys across all national higher education projects.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Target</th> <th>Actual</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>2007</td> <td>FY 07 actual</td> <td>30%</td> <td></td> </tr> <tr> <td>2008</td> <td>35%</td> <td></td> <td></td> </tr> <tr> <td>2009</td> <td>35%</td> <td></td> <td></td> </tr> <tr> <td>2010</td> <td>35%</td> <td></td> <td></td> </tr> <tr> <td>2011</td> <td>35%</td> <td></td> <td></td> </tr> </tbody> </table>	Year	Target	Actual	State	2007	FY 07 actual	30%		2008	35%			2009	35%			2010	35%			2011	35%		
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Long-term	Output	<p><b>Text:</b> Percentage of higher education program participants who have participated in NASA elementary or secondary programs.</p> <p><b>Explanation:</b> Baseline includes students as reported by contractor for Motivating Undergraduates in Science and Technology (MUST) project. Future enhancements will include standardized tracking and surveys across all national higher education projects.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Target</th> <th>Actual</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>2007</td> <td>FY 07 actual</td> <td>18%</td> <td></td> </tr> <tr> <td>2008</td> <td>baseline plus 5%</td> <td></td> <td></td> </tr> <tr> <td>2009</td> <td>baseline plus 10%</td> <td></td> <td></td> </tr> <tr> <td>2010</td> <td>baseline plus 20%</td> <td></td> <td></td> </tr> <tr> <td>2011</td> <td>baseline plus 30%</td> <td></td> <td></td> </tr> </tbody> </table>	Year	Target	Actual	State	2007	FY 07 actual	18%		2008	baseline plus 5%			2009	baseline plus 10%			2010	baseline plus 20%			2011	baseline plus 30%		
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Long-term	Output	<p><b>Text:</b> Percentage increase in <u>number</u> of elementary and secondary student participants in NASA instructional and enrichment activities.</p> <p><b>Explanation:</b> K-12 student involvement encompasses a range of activities including one-time, short duration enrichment activities to longer-term or sustained learning opportunities. Participants are provided with authentic first-hand opportunities in NASA mission activities through site-based and distance learning networks. Includes projects funded within the K-12 education program.</p>																								

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Long-term	Output	<p><b>Text:</b> Percentage of elementary and secondary educators who participate in NASA training programs who use NASA resources in their classroom instruction.</p> <p><b>Explanation:</b> NASA training programs result in deeper content understanding and confidence in teaching STEM disciplines. Teachers who attend professional development (experiences longer than two-days) are more likely to integrate NASA STEM resources in the classroom than other teachers. The data is based on teachers reporting using NASA product and resources in their classroom instruction.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Target</th> <th>Actual</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>2007</td> <td>FY07 actual</td> <td>62%</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2009</td> <td>70%</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2011</td> <td>75%</td> <td></td> <td></td> </tr> </tbody> </table>	Year	Target	Actual	State	2007	FY07 actual	62%						2009	70%							2011	75%		
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Long-term	Outcome	<p><b>Text:</b> Level of student interest in science and technology careers resulting from elementary and secondary NASA education programs.</p> <p><b>Explanation:</b> A prerequisite to student achievement in STEM subjects is a high level of interest. Therefore, NASA's projects are designed to take advantage of NASA's mission to enhance students' interest in aerospace-related, STEM subjects. Interest is measured by surveys of students conducted before and after participation in the NASA education program. This measure will report the percentage of students who report a post-participation increase in interest.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Target</th> <th>Actual</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>2007</td> <td>FY 07 actual</td> <td>50%</td> <td></td> </tr> <tr> <td>2008</td> <td>50% or &gt; interest</td> <td></td> <td></td> </tr> <tr> <td>2009</td> <td>50% or &gt; interest</td> <td></td> <td></td> </tr> <tr> <td>2010</td> <td>50% or &gt; interest</td> <td></td> <td></td> </tr> <tr> <td>2011</td> <td>50% or &gt; interest</td> <td></td> <td></td> </tr> </tbody> </table>	Year	Target	Actual	State	2007	FY 07 actual	50%		2008	50% or > interest			2009	50% or > interest			2010	50% or > interest			2011	50% or > interest		
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Long-term/Annual	Output	<p><b>Text:</b> Percentage of Museums and science centers that participate in NASA networks and that use NASA resources in programs &amp; exhibits.</p> <p><b>Explanation:</b> Approximately 20% of the 460 U.S. members of the Association of Science and Technology Centers (e.g. museums, science centers, and planetariums) are members of NASA's Museum Alliance (MA) (FY 07 Total MA membership: 300). In addition to MA members, other informal education providers, e.g. partners in the NASA Space Grant Consortium (50), parks, community museums, zoos, aquariums, SpacePlace Network, etc. use NASA resources in K-12 education, family or youth-based direct learning activities or to create or refresh exhibits. NASA's budget</p>																								

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		<p>request reflects a reduction each year through FY 11. NASA's objective is to continue serving the same number of institutions, despite these funding reductions. Estimated Universe of Informal Education providers served by NASA resources: 1750.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Target</th> <th>Actual</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>2007</td> <td>20% U.S. museums</td> <td>20%</td> <td></td> </tr> <tr> <td>2008</td> <td>20% U.S. museums</td> <td></td> <td></td> </tr> <tr> <td>2009</td> <td>20% U.S. museums</td> <td></td> <td></td> </tr> <tr> <td>2010</td> <td>20% U.S. museums</td> <td></td> <td></td> </tr> <tr> <td>2011</td> <td>20% U.S. museums</td> <td></td> <td></td> </tr> </tbody> </table>	Year	Target	Actual	State	2007	20% U.S. museums	20%		2008	20% U.S. museums			2009	20% U.S. museums			2010	20% U.S. museums			2011	20% U.S. museums		
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Long Term	Efficiency	<p><b>Text:</b> Dollar invested per number of people reached via e-education technologies.</p> <p><b>Explanation:</b> NASA will continue to use internet- and web-based technology to deliver content to reach ever larger numbers of participants. Percentage reductions are per year over the preceding year. The number of people reached is estimated based on the number of page views.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Target</th> <th>Actual</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>2007</td> <td>\$0.048 per page view</td> <td>\$0.032 per page view</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2010</td> <td>\$0.028 per page view</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Year	Target	Actual	State	2007	\$0.048 per page view	\$0.032 per page view						2010	\$0.028 per page view										
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Annual	Efficiency	<p><b>Text:</b> Cost per participant of programs</p> <p><b>Explanation:</b> NASA will work to achieve a reduction in the cost per K-12 program participant. As articulated in the education framework, we will draw from audiences that have demonstrated interest in NASA and connect participants to the next level of engagement. A blend of projects and activities encourage continued student affiliation with NASA throughout their academic career, resulting in efficiencies in recruitment and retention. NASA's budget request reflects a reduction each year through FY 11. To continue serving the same number or participants, it will be necessary to reduce the cost per participant.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Target</th> <th>Actual</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>2007</td> <td>FY07 actual</td> <td>\$13.18</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2009</td> <td>1% reduction from baseline</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2011</td> <td>2% reduction from baseline</td> <td></td> <td></td> </tr> </tbody> </table>	Year	Target	Actual	State	2007	FY07 actual	\$13.18						2009	1% reduction from baseline							2011	2% reduction from baseline		
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Annual	Efficiency	<p><b>Text:</b> Ratio of funds leveraged by NASA funding support.</p> <p><b>Explanation:</b> NASA works to maximize its investment by collaborating with</p>																								

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		<p data-bbox="506 186 1425 331">partner organizations. Data reported are based on matching dollars submitted in proposals to NASA for the Space Grant and EPSCoR programs. These external proposals are built on the research and education activities of the NASA programs. The non-NASA sources included state and other federal government agencies, and industry.</p>																										
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