

Education & Public Outreach

Lars Perkins

Chairman

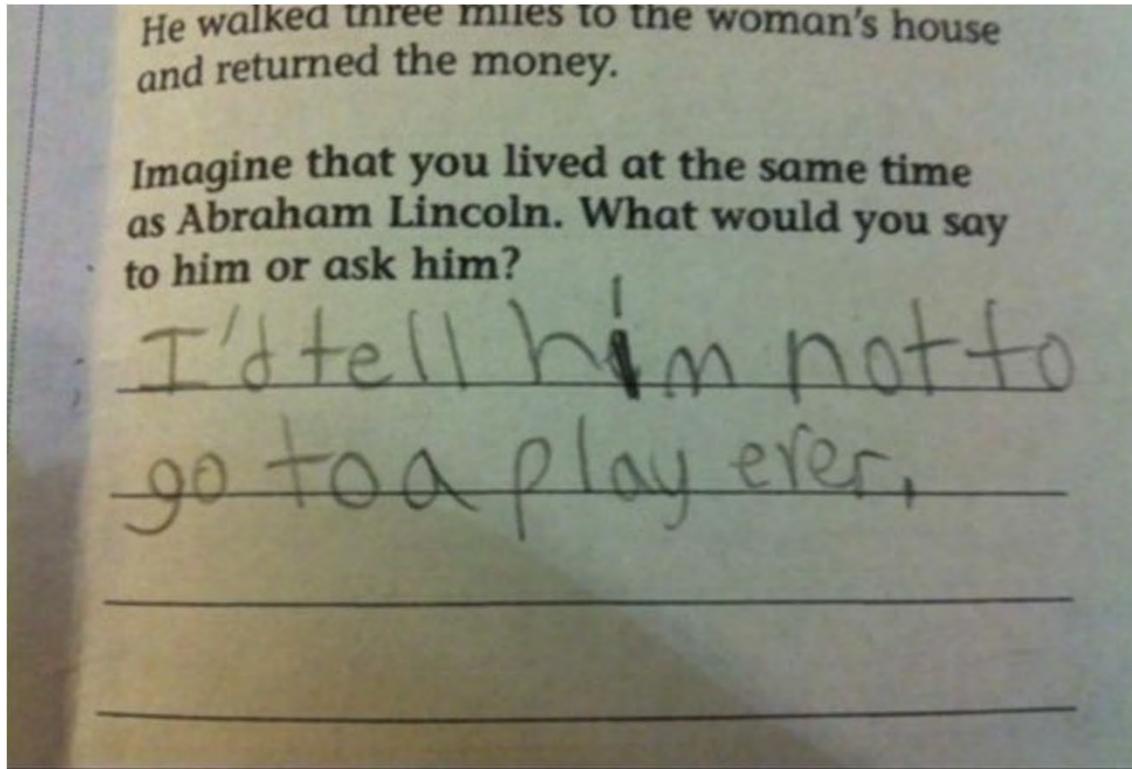
Education and Public Outreach Committee

NASA Advisory Council

25 April 2013



Other than that Mrs. Lincoln ...



... how was the play?



Education Budget Decimated

Total:

203 → 109

2012

2014

- Space Grant
- EPSCOR
- MUREP
- Space Technology Fellowship

**Non-
Directed:**

64 → 20

2012

2014



Topics

- ▶ Who we are
- ▶ E/PO activities since November
- ▶ Recent Activity
 - ▶ 4 March 2013
 - ▶ Recommendation
- ▶ Recommendation Status
- ▶ FY14 Budget
 - ▶ Recommendations
- ▶ Asteroid Mission





Richard
Garriott



Dwayne McCay



Michael Bostick



Peter Shankman



Iannis Miaoulis



Pilar Montoya



Scott
Parazynski



Doug King



Matthew Chamberlin



Lars Perkins



Stephen Pearse



The Taxi Driver Problem



4 March 2013 Meeting

- ▶ DC, 4 In Person, 2 Call In, 55%
- ▶ AGENDA
 - ▶ Education Briefing: Leland Melvin
 - ▶ Communication Briefing: David Weaver
 - ▶ Strategic Planning: Rebecca Kaiser
 - ▶ Participatory Exploration Erika Vick



NASA Education



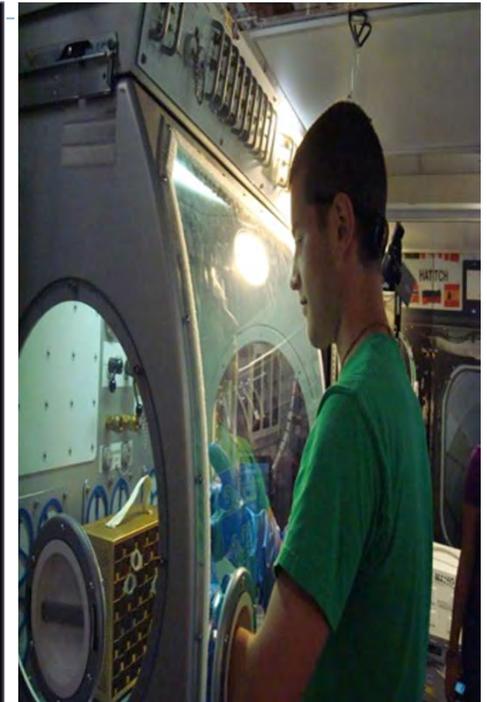
Leland D. Melvin

NASA Associate Administrator for Education

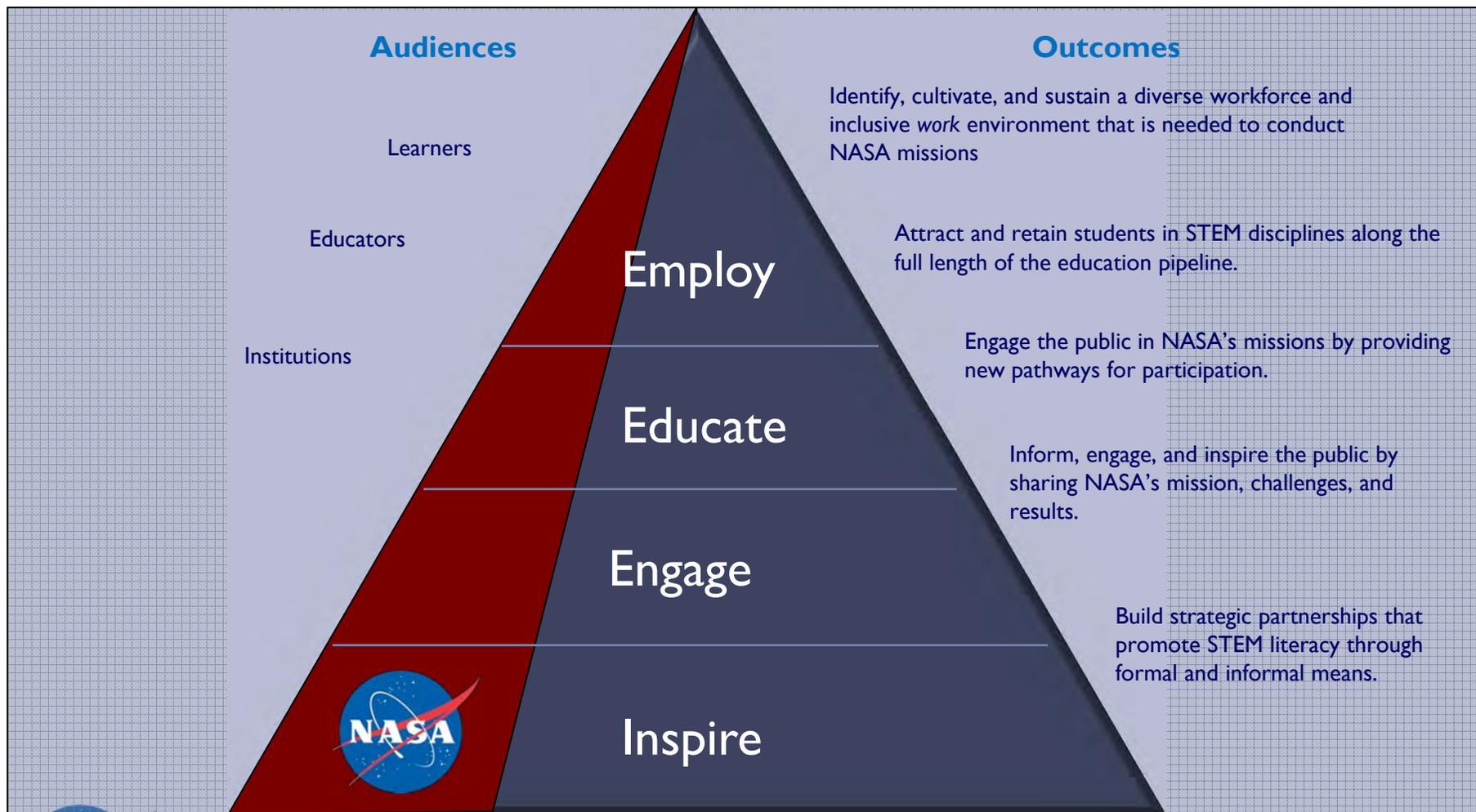


NASA Education Vision Statement

To advance **high quality** Science, Technology, Engineering, and Mathematics (**STEM**) education using **NASA's unique** capabilities



STEM Education Framework



Operating Principles

Relevance • NASA Content • Diversity • Evaluation • Continuity • Partnership/Sustainability



Statutory Requirements for STEM Education

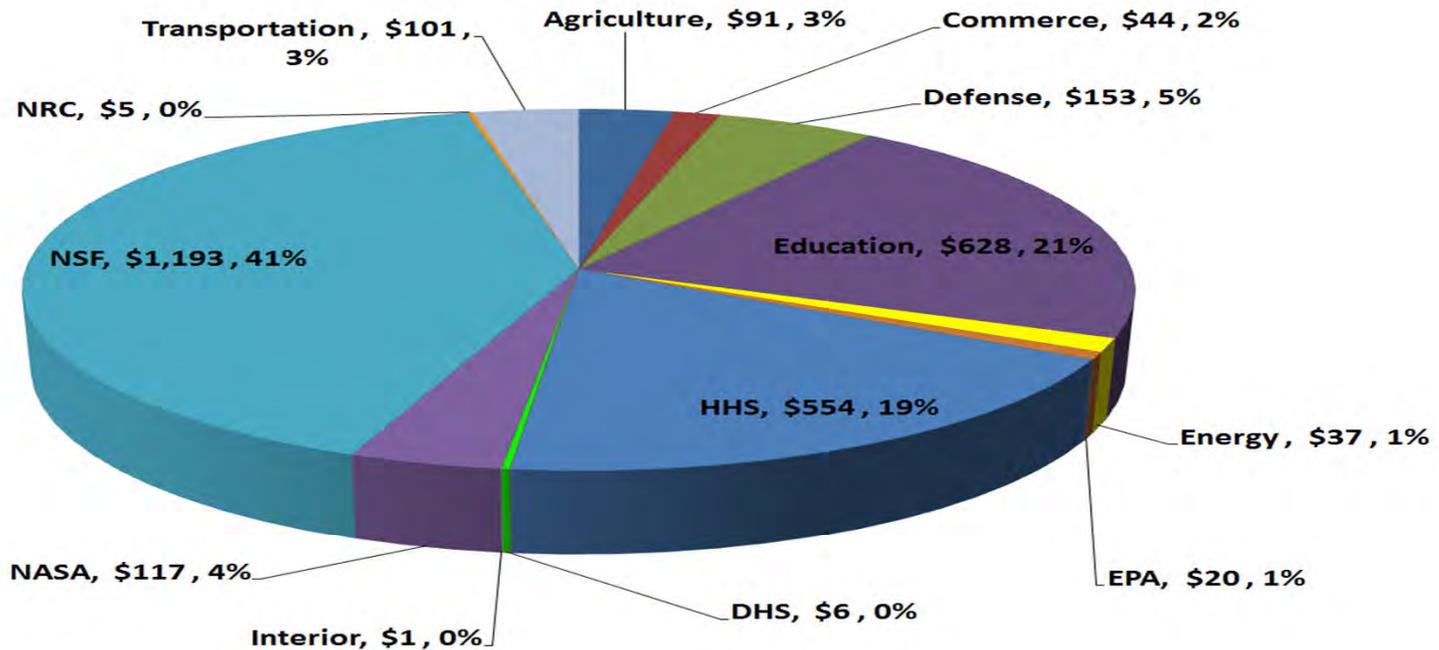
National Science and Technology Council (NSTC) Committee on STEM Education (CoSTEM) was established pursuant to the requirements of Sec. 101 of the America COMPETES Reauthorization Act of 2010.

- It requires NASA to actively engage in collaborations with other federal agencies to ensure the Agency's programs are supportive of national STEM priorities.
- The CoSTEM will serve as part of the internal deliberative process of the NSTC and provides overall guidance and direction. The purpose of the CoSTEM is to coordinate Federal programs and activities in support of STEM education.
- In accordance with the Act, CoSTEM is currently reviewing STEM education activities and programs, and the respective assessments of each, throughout Federal agencies to ensure effectiveness; coordinating, with the Office of Management and Budget, STEM education activities and programs throughout Federal agencies; and will develop and implement through the participating agencies a 5-year STEM education strategic plan, to be updated every 5 years.



FY 2013 Federal Investments in STEM Education

Federal STEM Education Investments by Agency (\$2,951 M)



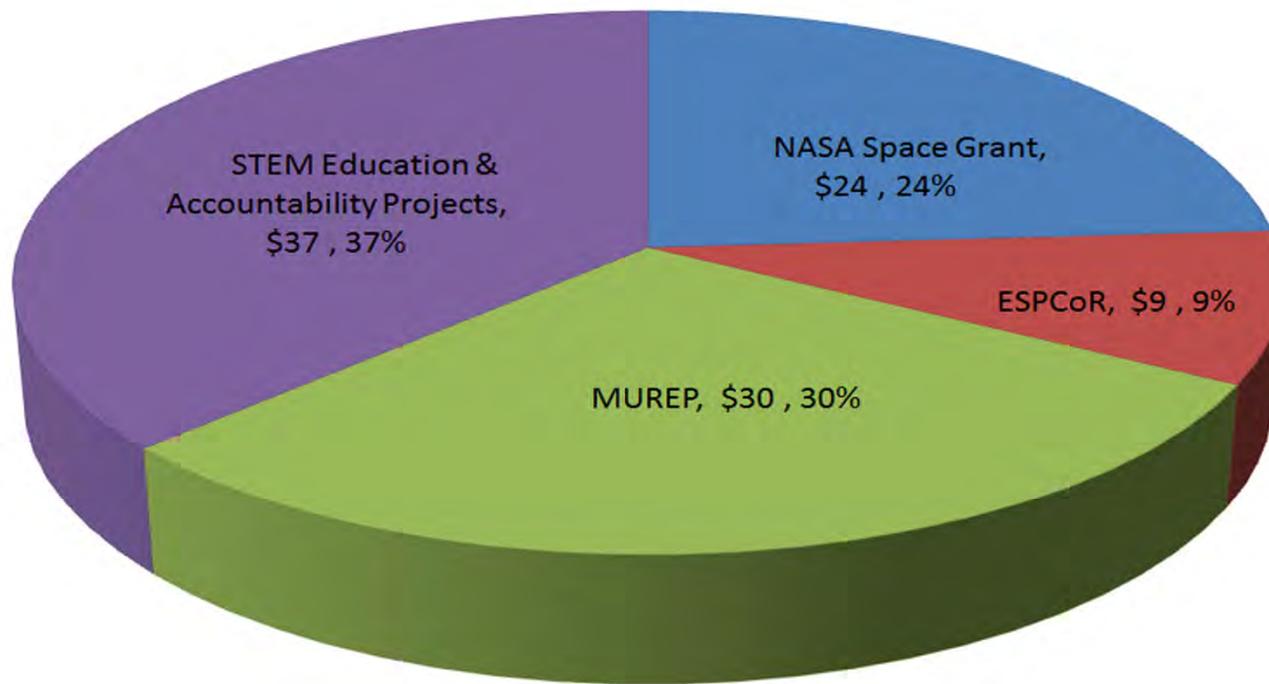
**209 investments
13 agencies**

*Source: Executive Office of the President, Office of Science and Technology Policy, *Preparing a 21st Century Workforce: Science, Technology, Engineering, and Mathematics Education in the 2013 Budget (Feb 2012)*



NASA Education FY 2014 STEM Total Investments

FY 2014 NASA Office of Education Funding by Source

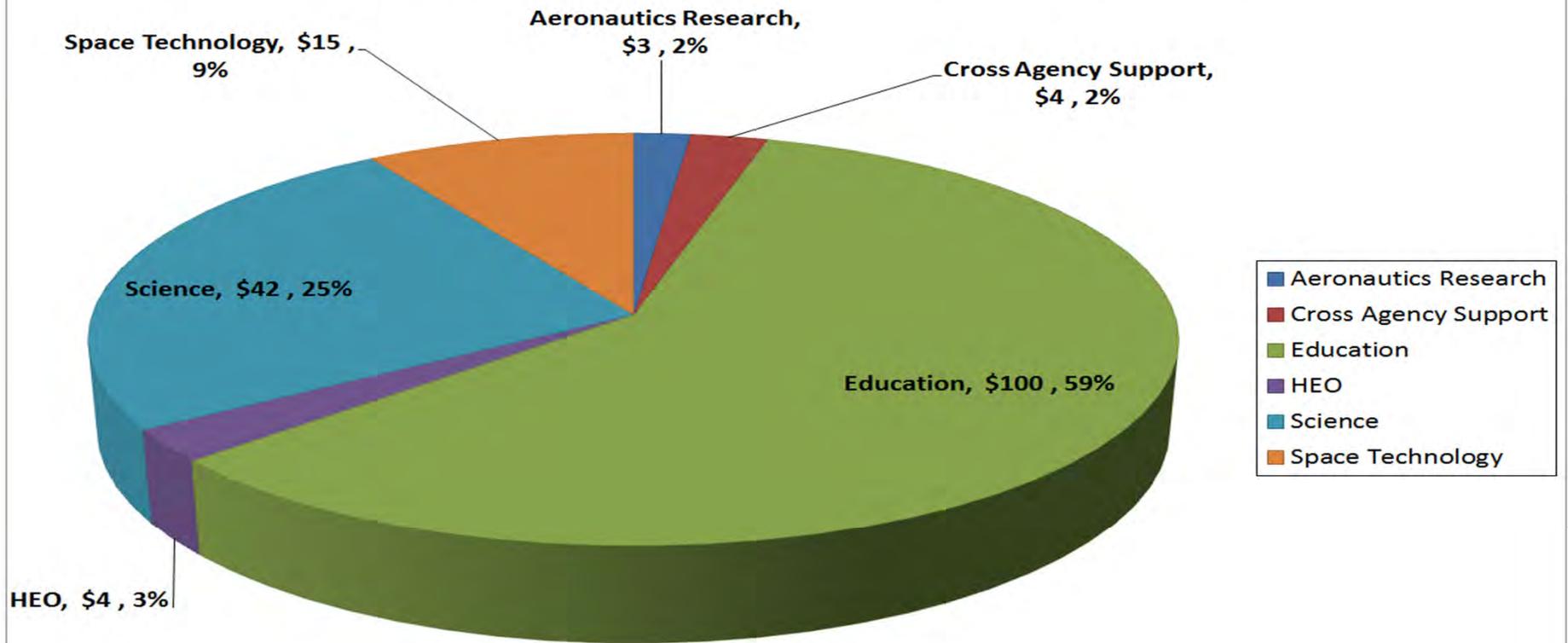


Total Investments - \$100M



Agency FY 2014 STEM Education Total Investments

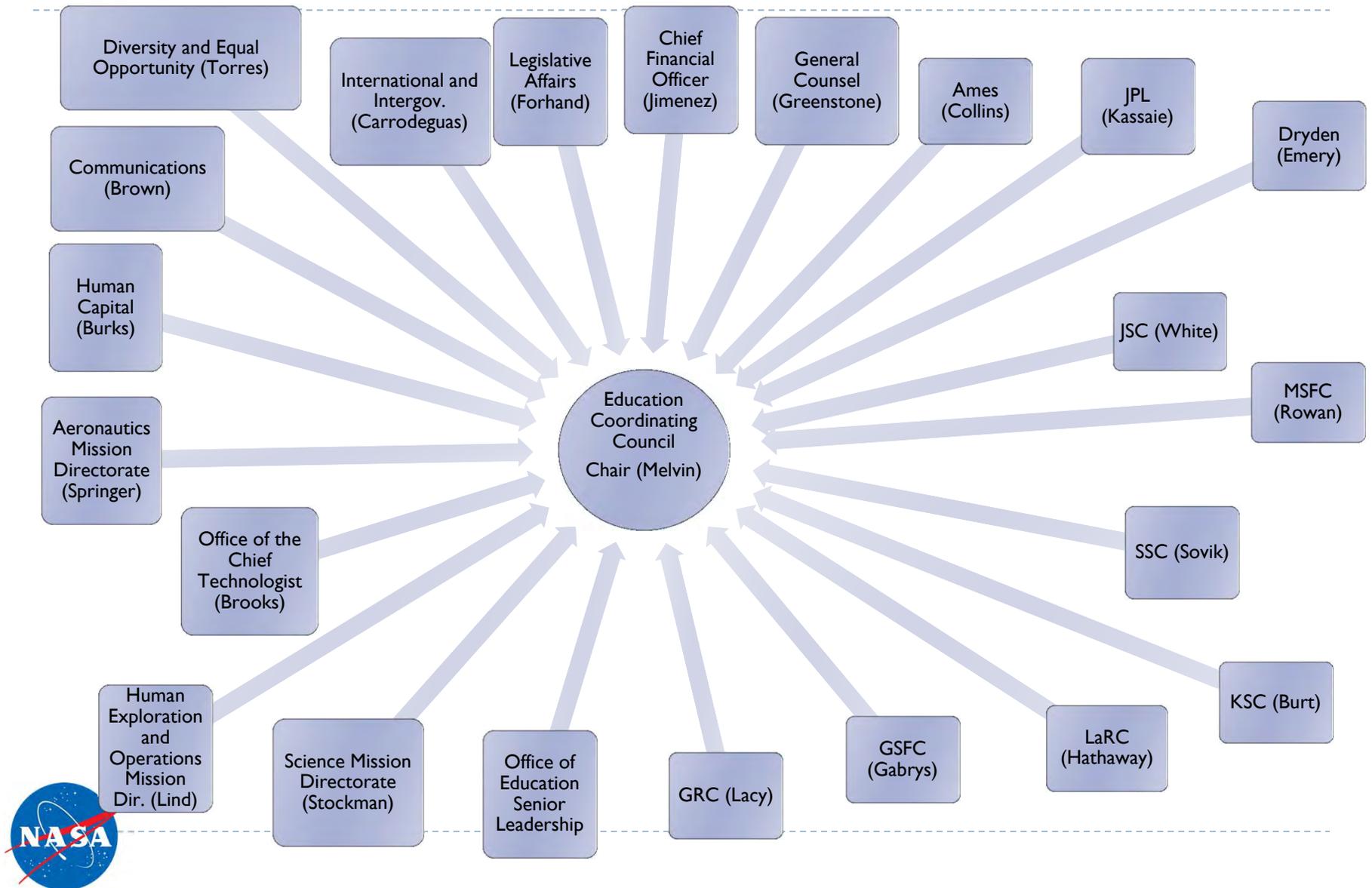
FY 2014 NASA Education Funding by Source



Agency Total Investments - \$169M



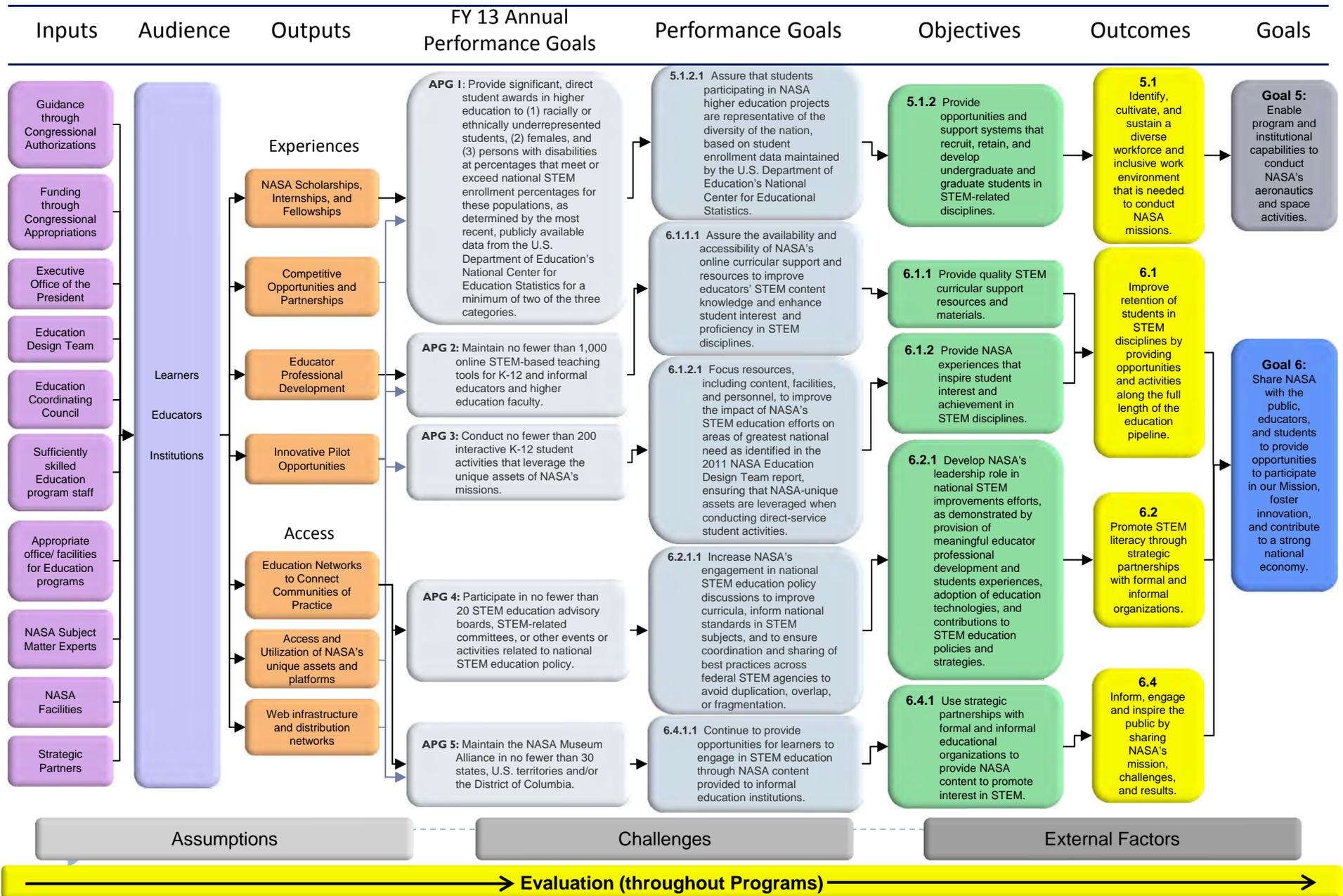
Education Coordinating Council

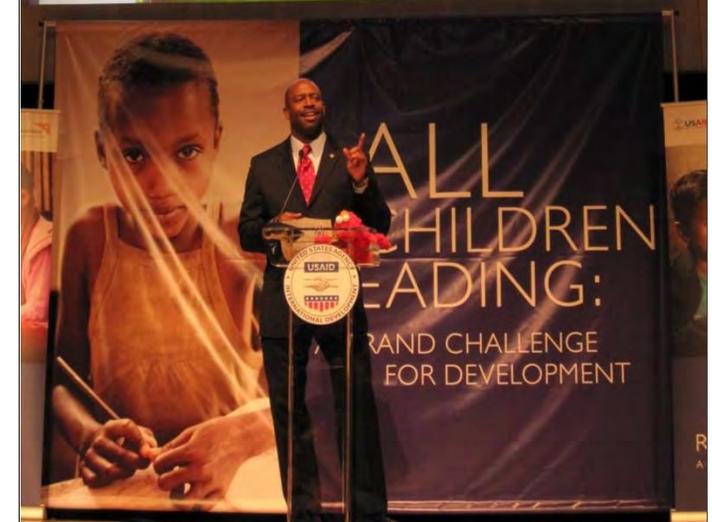
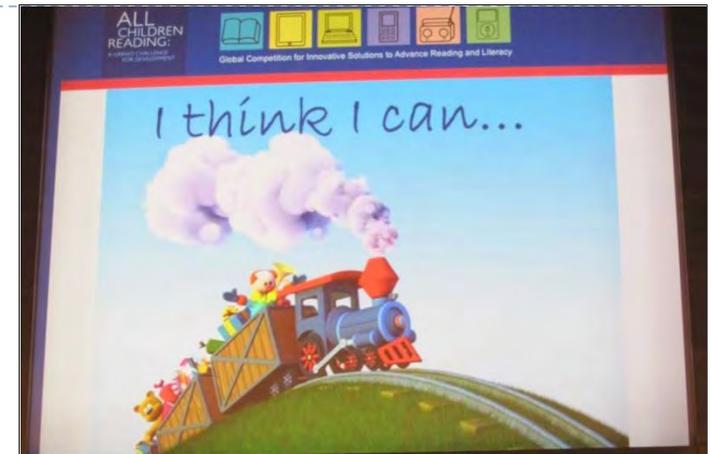




NASA Education - Model

Vision: To advance high quality Science, Technology, Engineering and Mathematics (STEM) education using NASA's unique capabilities.





LEGO

ISS Downlinks



Youtube Space Lab



SPHERES

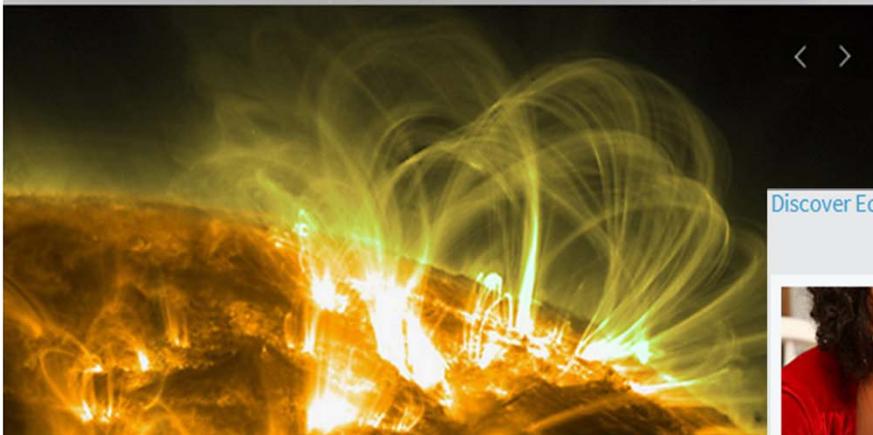




NASAWAVELENGTH

A Full Spectrum of NASA Resources for Earth and Space Science Education

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Audience

Topics

Activity- or math-based lessons on magnetic fields

Exploring Magnetism Lesson Series

View Magnetism

<http://nasawavelength.org/>

Discover Educator Resources for These Categories

Featured Resources



Pre-kindergarten



Elementary School



Middle School



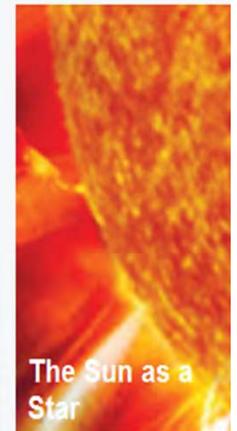
High School



Higher Education



Informal Education



The Sun as a Star

NASA GSFC

In this activity, students examine pictures of objects up close and far away to try and...

View Resource





The first four Airborne Astronomy Ambassador (AAA) educators: (from left) Constance Gartner, Vince Washington, Ira Hardin and Chelen Johnson at the educators' work station aboard the SOFIA observatory during a flight on the night of Feb. 12-13, 2013.



Stratospheric Observatory for Infrared Astronomy (SOFIA)



Citizen explorers address global challenges...



INTERNATIONAL
SPACE
APPS CHALLENGE

T-45 Days and Counting

The International Space Apps Challenge is a two-day technology development event during which citizens from around the world will work together to address current challenges relevant to both space exploration and social need.

NASA believes that mass collaboration is key to creating and discovering state-of-the-art technology. The International Space Apps Challenge aims to engage YOU in developing innovative solutions to our toughest challenges.

Join us on April 20-21, 2013, as we join together cities around the world to be part of pioneering the future. [Sign up](#) to be notified when registration opens in early 2013!

Communicating NASA's Story – Recent work and accomplishments



SpaceX (CRS-2) – March 1, 2013

- ▶ Second commercial flight to ISS
- ▶ Communications directed KSC launch viewing opportunities and contingency activities including live NASA TV coverage, critical web and social media updates, and media teleconference.
- ▶ Successful berthing on March 3



FY '14 Budget Announcement – April 10, 2013

- ▶ Fully integrated and strategic rollout across all projects and programs
- ▶ Full suite of multimedia support (video, stills, social media)
- ▶ Special interactive features:

www.nasa.gov/budget

www.nasa.gov/asteroidinitiative



Antares – Wallops Flight Facility

- ▶ Successful opening of NASA's next spaceport
- ▶ Significant center collaboration to provide live NASA TV coverage (MSFC, GSFC, LaRC, WFF, HQ, JSC, etc).
- ▶ Planned guest viewing opportunities at Wallops for future Antares launches; more on scale with VAFB than KSC

Communicating NASA's Story – NASA in the Web and Social Media

Google+ Hangout – March 22, 2013



- ▶ ISS Commander Suni Williams and JAXA's Aki Hoshide
 - ▶ 3,322 viewers and a total of 17,866 minutes watched
 - ▶ 211 questions/comments on YouTube alone
 - ▶ Participants included students, public questions, and even one airline passenger in midflight

- ▶ Hangout still available online:

<http://bit.ly/YQZxxl>



First HQ Reddit AMA – April 17, 2013

- ▶ Deputy Administrator Lori Garver launched new activity
 - ▶ After first 24 hours, it was more popular than Game of Thrones with higher favorability ratings than Elon Musk and President Obama

- ▶ Reddit AMA available online at:

<http://bit.ly/11PQqh5>



More Awards for Industry Excellence – 2013

- ▶ Second consecutive Shorty Award for @NASA
 - ▶ Account has nearly 3.9 million followers, the most in government (including the White House)

▶ @MarsCuriosity also honored

- ▶ Sixth consecutive Webby Award recognition for NASA.gov

Strategic Planning Cycle

- ▶ Rebecca Kaiser
- ▶ 4 Year Process
- ▶ Input from all stakeholders
- ▶ Last time around “Vision Statement”:

“To reach for new heights and reveal the unknown so that what we do and learn will benefit all humankind.”



Example Visions

“Dare Mighty Things”

“Inventing The Future”

“We Reach Farther”

“Invent. Discover. Explore”

“We Explore the Universe. So Can You.”





Where big ideas are born.

Enter your search here...

I NVENT.

- A cheaper way to fly ›
- The world's most powerful telescope ›
- A way to detect melting icecaps ›
- See more »

D ISCOVER.

- Other habitable planets ›
- The origin of our solar system ›
- The birth of the univers ›
- See more »

E XPLORE.

- Mars ›
- Venus ›
- Our nearest star-neighbors ›
- See more »

A DVANCE.

- Propulsion ›
- Supercomputing ›
- Aeronautics ›
- See more »

RESOURCES



VIDEOS



PHOTOS



JOBBS

Download our apps



Fun fact: Kepler has discovered **2,321** planets!

[Surprise me!](#)



Separation of Vision and Mission

▶ Recommendation

- ▶ NASA should, as part of its strategic planning process, create a short inspirational “vision statement” that embodies NASA’s aspirational goals. In addition, NASA should rewrite the current vision statement to be clearer, more focused, and reposition it as the “mission statement”

▶ Reason

- ▶ The current vision, is long, unmemorable, generic, and does not resonate with or inspire the public. Even as such a longer articulation of NASA’s goals may be appropriate for internal dissemination, but a shorter, inspiring vision will be more effective in increasing awareness of NASA.

▶ Consequences of No Action

- ▶ Continuing public confusing about the overarching theme which binds all NASA programs together.



And then something bad happened ...



“Would you please elaborate on ‘then something bad happened’?”



NASA Internal Memo: Guidance for Education and Public Outreach Activities Under Sequestration

"Effective immediately, all education and public outreach activities should be suspended, pending further review. In terms of scope, this includes all public engagement and outreach events, programs, activities, and products developed and implemented by Headquarters, Mission Directorates, and Centers across the Agency, including all education and public outreach efforts conducted by programs and projects.

The scope comprises activities intended to communicate, connect with, and engage a wide and diverse set of audiences to raise awareness and involvement in NASA, its goals, missions and programs, and to develop an appreciation for, exposure to, and involvement in STEM. Audiences include employees, partners, educators, students, and members of the general public. The scope encompasses, but is not limited to:

- Programs, events, and workshops.
- Permanent and traveling exhibits, signage, and other materials.
- Speeches, presentations, and appearances, with the exception of technical presentations by researchers at scientific and technical symposia.
- Video and multimedia products in development (and renewal of existing products).
- Web and social media sites in development (excludes operational sites).
- External and internal publications, with the exception of Scientific and Technical Information as defined by NPD 2200.1B.
- Any other activity whose goal is to reach out to external and internal stakeholders and the public concerning NASA, its programs, and activities."

March 22, 2013





FY 2014 NASA Education Approach

*Advancing high quality
STEM education using
NASA's unique capabilities*

*Lars Perkins
NASA Advisory Committee
April 2013*





NASA Education Roles in STEM Reorganization

- Fund the best education programs from across the Agency.
- Provide evidence-based approaches and results to support the NASA Education activities.
- Ensure NASA's unique facilities, assets and workforce are integrated into federal coordination effort.
- Lead development of CoSTEM Strategic Plan with the National Science Foundation.
- Execute a unified, systematic, and standardized approach to data collection and performance assessment across NASA Education.
- Leverage NASA investments in STEM infrastructure to scale up dissemination of NASA content through coordinated efforts.



NASA STEM EDUCATION INVENTORY FUNDING TRACE

	FY 2012 Budget Estimate	Changes	FY 2014 Budget Request
\$ in Millions			
Total	202.5	(93.1)	109.4
Education	138.4	(44.2)	94.2
Aerospace Research and Career Development	58.4	(25.4)	33.0
<i>NASA Space Grant</i>	40.0	(16.0)	24.0
<i>ESPCoR</i>	18.4	(9.4)	9.0
STEM Education and Accountability	80.0	(18.8)	61.2
<i>MUREP</i>	30.0	0.0	30.0
<i>STEM Education and Accountability Projects</i>	40.0	(8.8)	31.2
<i>Formal and Informal Education</i>			
<i>Innovation in Education</i>			
<i>Evaluation, Performance, Monitoring, & Accountability</i>			
<i>Informal STEM Education</i>	10.0	(10.0)	
<i>GLOBE</i>		4.5	4.5
<i>STEM Interagency Coordination</i>		6.8	6.8
<i>STEM Facilitation</i>		19.9	19.9
Mission Directorates Subtotal	64.1	(48.9)	15.2
Science	41.9	(41.9)	0.0
Aeronautics Research	3.3	(3.3)	0.0
Space Technology	10.4	4.8	15.2
Exploration	4.4	(4.4)	0.0
Space Operations	0.0	0.0	0.0
Cross Agency Support	4.1	(4.1)	0.0



So where does the EPO \$ Come from?

Science Mission Directorate Policy

Policy and Requirements for the

Para #	NPR 7120.5 Requirement Statement	Requirement Owner	Tailor	MD AA	CD	PM	Comply?	Justification	Approval
Tabl I-1	11. Security Plan [Baseline at SDR] [per NPD 1600.2 and NPRs 1600.1, 1040.1, and 2810.1]	OPS OCIO				A			
Tabl I-1	12. Threat Summary [Baseline at SDR]	OCE	X			A			
Tabl I-1	13. Technology Transfer (formerly Export) Control Plan [Baseline at SDR] [per NPR 2190.1]	OHIR				A			
Tabl I-1	14. Education Plan [Baseline at SDR]	OE				A			
Tabl I-1	15. Communications Plan [Baseline at SDR]	OComm				A			
Tabl I-1	16. Environmental Protection Plan [Baseline at SDR]	OCE				A			

- SMD missions must have an E/PO program that supports NASA's strategic goals and objectives for education and outreach, contributes to NASA's education portfolio, and is aligned with SMD's E/PO portfolio.

- SMD missions must have an E/PO program that is funded with at least 1% of the total prime mission cost excluding launch vehicle.
- SMD missions will designate an E/PO Lead who has the qualifications and experience necessary to successfully implement the mission's E/PO program.
 - SMD missions will partner with NASA and non-NASA organizations as appropriate in order to increase the quality and reach of the E/PO program.

1.2 Rationale for Mission E/PO Requirements

The SMD E/PO lead is required to report on the SMD E/PO portfolio and show that it aligns with the NASA Education portfolio. The Lead is responsible for reporting E/PO metrics for

Education and Public Outreach (EPO) Activities Under Sequestration

- ▶ ~~Guidance issued by NASA Chief of Staff and Chief Financial Officer March 22, 2013~~ regarding EPO Activities Under Sequestration
 - ▶ Suspended EPO activities pending further review
 - ▶ Established waiver process for activities prior to May 1, 2013
 - ▶ Formally requested EPO Activity Summaries from Mission Directorates and Centers identifying planned activities for remainder of FY2013
- ▶ As of Friday, April 19, Office of Communications has reviewed 153 waivers
 - ▶ Approved: 118
 - ▶ Conditionally approved: 21
 - ▶ Denied: 9
 - ▶ Out of scope (no need for approval/denial): 5
- ▶ Joint Office of Communications and Office of Education review of EPO Activity Summaries in in process.
 - ▶ EPO Activity Summaries received from Mission Directorates and Centers April 15
 - ▶ Data compilation and integration completed April 23
 - ▶ Review of planned May activities to be completed by April 30
 - ▶ Analysis and review of remaining FY2013 activities to be completed by May 31



CCC continues implementation of strategies for 2013

- ▶ Utilize CCC-defined strategic communications priorities via campaigns, beginning with budget rollout to effectively deliver the overarching story about NASA
 - ▶ Implement new approaches to tell the ISS story
 - ▶ Convey a powerful story about what NASA does to benefit life on Earth
 - ▶ Convey NASA's role in leading the world in Mars exploration and extending human presence into deep space
 - ▶ Deliver compelling results from our endeavors exploring our solar system and beyond
- ▶ Continue our work to Implement an effective operational model and governance structure
 - ▶ Obtain approval of NPD for Communications to establish scope, roles and accountabilities for Communications function agency-wide. Initial review has been completed and is undergoing final stages of approval.
 - ▶ Initiate development of NPR for Communications, to define and establish policies and procedures for the overall Communications function.
 - ▶ Further operate the Communications Coordinating Council (CCC) as a governing body, which includes decisional authority over strategic communications efforts and issues.
 - Establish a Digital Services strategy, structure and policies in response to OMB directive and in concert with OCIO to govern web infrastructure and content



Education Budget Decimated

Total:

203 → 109

2012

2014

- Space Grant
- EPSCOR
- MUREP
- Space Technology Fellowship

**Non-
Directed:**

64 → 20

2012

2014



Websites ...

GRAVITY PROBE B

Testing Einstein's Universe

Search this site:



HOME STATUS MISSION TECHNOLOGY SPACETIME RESOURCES

2PG SUMMARY (PDF) VIDEO OVERVIEW CONCEPT ANIMATION EVERITT TALK (VIDEO) TESTING EINSTEIN'S UNIVERSE (VIDEO)

MISSION STATUS

Final results of the GP-B experiment were announced at NASA HQ in Washington DC on 4 May 2011.

The experimental results are in agreement with Einstein's theoretical predictions of the geodetic effect (0.28% margin of error) and the frame-dragging effect (19% margin of error). For details, see Mission Status Update page...

Francis Everitt awarded the Austrian Cross of Honor for Science & Art

QUICK LINKS

- FAQ (Revised Sep 2008)
- Press Information
- NASA Post-Flight Report (Mar 2007)
- NASA Science Report (Dec 2008)
- Slides from Presentations
- Technical Papers
- Image Gallery and Media Gallery
- KACST - Stanford Documents

COLLABORATORS



CHANDRA X-RAY OBSERVATORY

NASA's flagship mission for X-ray astronomy

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V1647 ORI: X-raying the beating heart of a newborn star

Using combined data from a trio of orbiting X-ray telescopes, astronomers have obtained a rare glimpse of the powerful phenomena that accompany a still-forming star. More (3 Jul 12)

1 2 3

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319 21 08 25

Days Hours Min Sec

GRAIL Videos

GRAIL Mission Returns First Video of Moon's Far ...

HOME NEWS MISSIONS MULTIMEDIA CONNECT ABOUT NASA

Search

NASA Home > Missions > Gravity Probe B

Gravity Probe B

The Relativity Mission

Latest News

NASA's Gravity Probe B Confirms Two Einstein Space-Time Theories

NASA's Gravity Probe B (GP-B) mission has confirmed two key predictions derived from Albert Einstein's general theory of relativity, which the spacecraft was designed to test. The experiment, launched in 2004, used four ultra-precise gyroscopes to measure the hypothesized geodetic effect, the warping of space and time around a gravitational body, and frame-dragging, the amount a spinning object pulls space and time with it as it rotates. GP-B determined both effects with unprecedented precision by pointing at a single star, IM Pegasi, while in a polar orbit around Earth.



Artist concept of Gravity Probe B spacecraft in orbit around the Earth. Image Credit: Stanford

Gravity Probe B Videos

- A 'Simple' Experiment
- The Drag-Free Satellite
- Superconductivity and the London Moment
- Measuring Spacetime Curvature

PRECIPITATION MEASUREMENT MISSIONS

Home GPM TRMM Science Applications Multimedia Meetings Data Access Resources

Bird Migration to be Tracked by GPM Radar

NASA and The Nature Conservancy have joined forces to support the ability to measure precipitation on a global scale while also understanding migratory bird habitats on the Eastern Shore of Virginia. The organizations have signed a Space Act Agreement that will provide a location to support NASA's Precipitation Science programs, in particular the NASA-JAXA Global Precipitation Measurement mission. As a byproduct of this research, ...



TRMM

TROPICAL RAINFALL MEASURING MISSION

Launched by NASA and JAXA in 1997, TRMM carries the first on-orbit active/passive instrument package to study the intensity and structure of tropical rainfall.

GPM

GLOBAL PRECIPITATION MEASUREMENT

An international satellite mission to be launched by NASA and JAXA in 2014 that will set new standards for precipitation measurements worldwide using a network of satellites united by the GPM Core Observatory.

FEATURED ARTICLES

1 2 3 4 5

MISSION UPDATES

LATEST RAINFALL DATA



Picture Gallery

Other Links

ACE CRIS ULEIS SWIMS EPAM

Instruments SIS SEPICA SWICS SWEPAM

September 29, 2009: Science@NASA Feature Headline: Cosmic Rays Hit Space

Jet Propulsion Laboratory

Apps ...

iPhone Apps

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 **NASA Be A Martian**
Education
Released Jul 12, 2012
FREE ▾

 **Spacecraft 3D**
Education
Released Jul 11, 2012
FREE ▾

 **Comet Quest**
Games
Updated Jul 03, 2012
FREE ▾

 **Earth-Now**
Education
Updated Jun 29, 2012
FREE ▾

 **Satellite Insight**
Games
Updated Jul 23, 2012
FREE ▾

 **Cassini**
Education
Released Jul 20, 2011
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 **Aquarius**
Education
Updated Jul 20, 2011
FREE ▾

NASA Ames Research Center

iPhone Apps

Sort By: **Release Date** ▾

 **Sector 33 Games**
Released Jan 30, 2012
DOWNLOAD ▾

 **NASA App**
Education
Updated May 21, 2012
DOWNLOAD ▾

iPad Apps

 **Spacecraft 3D**
Education
Released Jul 11, 2012
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NASA

iPhone Apps

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 **Space365**
Education
Released Jul 25, 2012
FREE ▾

 **NASA HIAD**
Education
Released Jul 07, 2012
FREE ▾

 **ISSLive**
Education
Released Mar 02, 2012
FREE ▾

 **NASA Desert RATS Virtual Test**
Education
Released Sep 12, 2011
FREE ▾

 **AstroApp: Space Station Crew**
Education
Updated Oct 06, 2011
FREE ▾

 **NASA Television News**
Updated Jun 22, 2011
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 **AstroApp: Space Shuttle Crew**
Education
Updated Jul 13, 2012
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 **NASA Space Weather**
Weather
Updated Jun 10, 2011
FREE ▾

 **NASA Lunar Electric Rover Simulator**
Games
Released Feb 22, 2010
FREE ▾

iPad Apps 1-9 of 13 See All ▸

Sort By: **Release Date** ▾

 **Space365**
Education
Released Jul 25, 2012
FREE ▾

 **Space Place Prime**
Education
Released Jul 24, 2012
FREE ▾

 **NASA Science: A Journey of Discovery**
Education
Released Jul 12, 2012
FREE ▾



NASA 100,612 subscribers 32,874,154 video views

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NASAJPL Videos 29,696 subscribers 8,858,312 video views

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717,344 views 1 month ago

First Movie of Asteroid 2005 YU55 0:28
717,344 views 8 months ago

Mars Science Laboratory Curiosity... 11:20
646,193 views 1 year ago

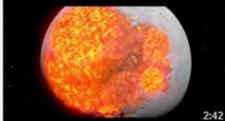
NASA Goddard 75,761 subscribers 23,414,104 video views

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NASA | Evolution of the Moon 2:42
2,434,568 views 4 months ago

NASA | SDO's Ultra-high Definition ... 3:07
2,017,488 views 1 month ago

NASA | 1,216,03

Science@NASA 23,805 subscribers 5,614,640 video views

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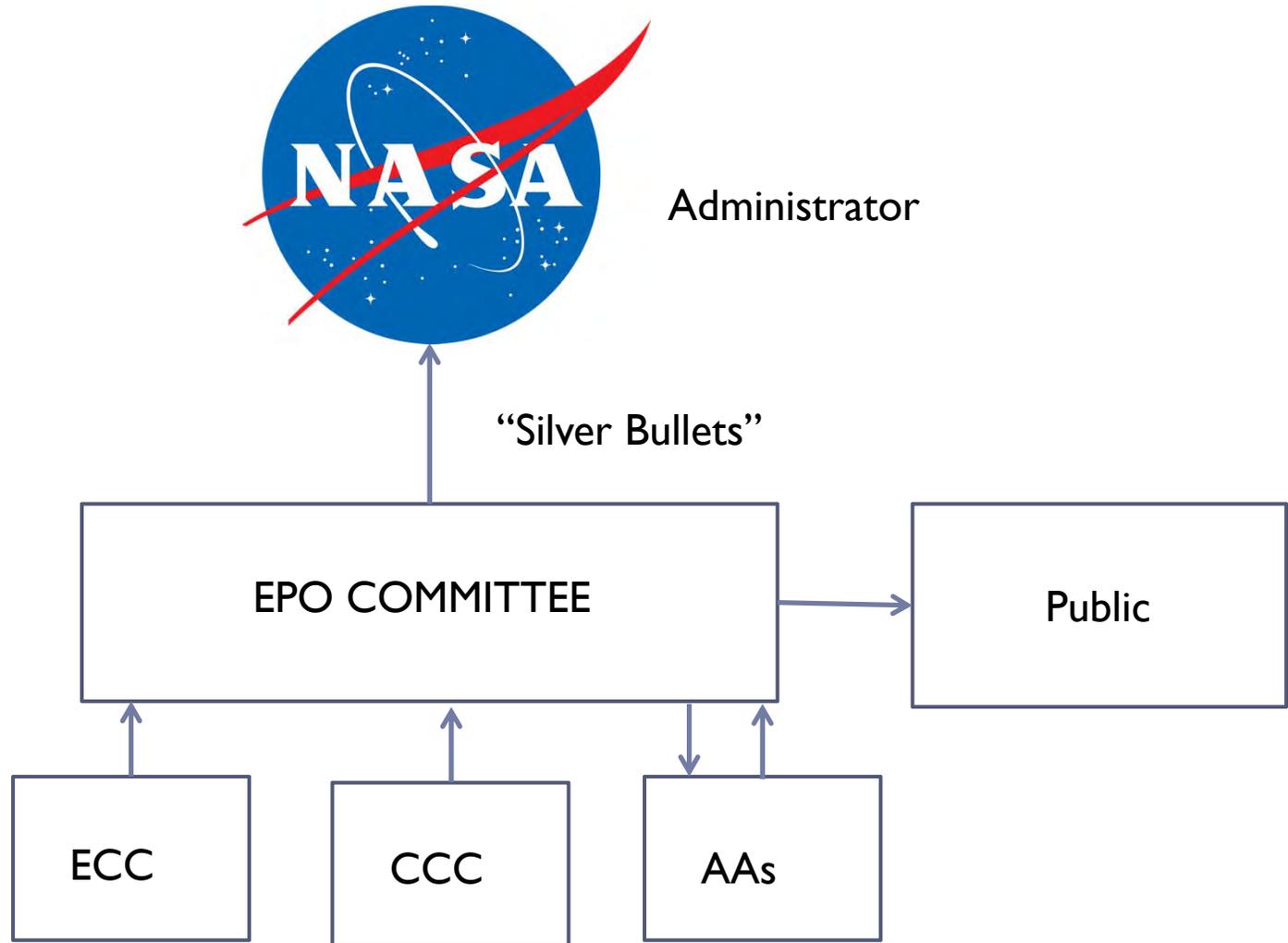
ScienceCasts: Super Moon 3:00
1,020,054 views 1 year ago

ScienceCasts: The Super Moon of ... 3:25
633,466 views 4 months ago

ScienceCasts: The 2012 Transit of ... 3:53
362,353 views 2 months ago



EPO Activities



ACTIONABLE AT THE LEVEL OF THE ADMINISTRATOR

Up (Context)	Administrator (Define)	AA's (Implement)
<ul style="list-style-type: none"> • Ambitious and inspiring directorate goals • Goals must be realistic and durable • Goals must be funded 	<ul style="list-style-type: none"> • Define the “Why” Message 	<ul style="list-style-type: none"> • Consolidate web, social, video, apps
	<ul style="list-style-type: none"> • Create the unifying framework to communicate the “How” 	<ul style="list-style-type: none"> • Top down message integration
	<ul style="list-style-type: none"> • Ensure E/PO activities are funded 	<ul style="list-style-type: none"> • Advertise via Education
<ul style="list-style-type: none"> • Clarify NASA’s role in national STEM initiatives 	<ul style="list-style-type: none"> • Ensure E/PO activities are integrated in directorate activities 	
<ul style="list-style-type: none"> • Acknowledge NASA’s strategic assets 	<ul style="list-style-type: none"> • Implement Organizational design to support 	



One Message

▶ Recommendation

- ▶ NASA should develop one overarching message under which all NASA activities and programs (e.g. Aeronautics) can be integrated and presented to the public. All NASA websites, videos, apps, and social media should be consolidated and be organized thematically under this message and exposed via WWW.NASA.GOV.

▶ Reason

- ▶ The public is exposed to NASA activities through various channels and without a unifying conceptual framework, leading to confusion about NASA's identity and purpose. Some activities (ARMD) have little public awareness.

▶ Consequences of No Action

- ▶ Continuing public confusion about NASA's mission and direction leading to eroding public support and marginalization of NASA's societal value.

NASA
CONCURS



EPO C of E

▶ Recommendation

- ▶ NASA should identify and/or develop “centers of excellence” for EPO activities to whom project teams can reach out when developing their EPO programs. These should include (but not be limited to): social media, web site design, app development, data visualization, and video production.

▶ Reason

- ▶ Lower costs, reduce duplication of effort, share best practices, move toward consistency in communication style and usability.

▶ Consequences of No Action

- ▶ NASA will overspend as it continues to “reinvent the wheel” as each project / mission develops its own online, mobile and social presence. These various implementations may “speak with different voices” and not be aligned with NASA’s overall strategic goals.



approach for planning and implementation of Education and Public Outreach activities. The August 18, 2012, release of NASA Procedural Requirement 7120.5E includes a new requirement for flight programs and projects to submit Communications and Education Plans.

Elevation of CCC

▶ Recommendation

- ▶ Building on the success of the ECC, the Communications Coordinating Committee (CCC) should be elevated to a Council, moving it from a coordination role to strategic and decisional function.

▶ Reason

- ▶ The ECC has been successful in bringing together CSM education resources to coordinate their activities and present a higher profile, integrated presence to the public. A similar opportunity exists now for communications.

▶ Consequences of No Action

- ▶ Duplicative messaging to public, lack of message coordination, less “wood” behind more “arrows”, leading to public confusion.



EPO Subgroups

- ▶ **Social Media, Crowdsourced PR / Education**
 - ▶ Matthew Chamberlin, Peter Shankman
- ▶ **Museums & Visitor Centers**
 - ▶ Doug King, Steve Pearse
- ▶ **Schools**
 - ▶ Dwayne McKay, Pilar Montoya
- ▶ **Professional Societies**
 - ▶ Pilar Montoya
- ▶ **Hollywood**
 - ▶ Michael Bostick
- ▶ **Strategic Messaging, Website**
 - ▶ Lars Perkins, Richard Garriott



A photograph showing a rocket-powered hover crane on the surface of Mars. The crane is a complex metal structure with several thrusters, and it is lifting a rover (likely the Curiosity rover) by a cable. The rover is suspended in the air, and the crane's thrusters are firing, creating a large plume of white smoke and dust. The ground is reddish-brown and rocky. The text "SORRY, WHAT WAS THAT ABOUT A GOLD MEDAL?" is overlaid in white, bold, sans-serif font in the upper left corner. The text "I COULDN'T HEAR YOU OVER OUR ROCKET-POWERED HOVER CRANE!" is overlaid in white, bold, sans-serif font in the lower left corner.

**SORRY, WHAT WAS THAT
ABOUT A GOLD MEDAL?**

**I COULDN'T HEAR YOU
OVER OUR ROCKET-POWERED HOVER CRANE!**











Mars fans make viral video



"We're NASA and We Know It" celebrates NASA's latest Mars mission.



Who is NASA's mohawk guy?



by Amora McDaniel, Assistant editor

August 6, 2012 | 3:48pm EDT

Last Modified: August 6, 2012 | 3:55pm EDT

So we all know about NASA's Mars Curiosity rover landing safely on the surface of Mars last night, but who we are really curious about is the Internet sensation the Mars landing created—Mohawk Guy.

Bobak Ferdowski—the astronaut with red and black mohawk with yellow stars dyed into the sides sitting behind the control desk—became an instant Internet celebrity. His hairstyle now has a dedicated Tumblr page, and, according to the *Atlantic*, Ferdowski's own Twitter page went from nearly 200 followers to over 8,000 in the span of a few hours.

[Enlarge Image »](#)



Mohawk Guy—also known as Bobak Ferdowski—celebrates the Mars landing while the Internet celebrated his unique hairstyle.

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NASA's Mars Rover Team: Spacemen of the Year 2012

NASA's Mars Rover Team: Spacemen of the Year 2012

BY PAUL KVINTA | PHOTOGRAPHS BY DAN WINTERS

November 2012



Integrated infant / H2O risk mitigation

- ▶ **Recommendation**

- ▶ Don't throw baby out with bathwater.

- ▶ **Reason**

- ▶ Baby dies or is severely injured.

- ▶ **Consequences of No Action**

- ▶ Baby lives.



FY14 Transitional Year For EPO

▶ Recommendation

- ▶ Rather than halting most all EPO programs immediately, fund and recast FY14 as a transitional year where existing programs can be evaluated, and slated for shutdown, transfer to other agencies, or continuance in an orderly fashion.

▶ Reason

- ▶ NASA EPO Programs are arguably the most inspirational and successful infusion of science into the public consciousness. In a time of austerity we recognize it is important to consolidate education efforts and eliminate redundancies. NASA programs built around missions such as Hubble and Curiosity are, however, unique and NASA specific, as they are built around dynamic missions, not textbook knowledge. We feel thoughtful deliberation is necessary to develop a transition plan which preserves NASA's unique capabilities, eliminates redundancies, and best serves the interests and strategic vision of our nation.

▶ Consequences of No Action

- ▶ Immediate shutdown will prematurely terminate programs in progress, cause loss of NASA's educational institutional knowledge, and dramatically disrupt the continuity of public messaging at a time when NASA's popularity and inspirational impact are at a decades-high level. We also feel this change in NASA's ability to execute educational programs will significantly degrade the nation's STEM education capability during this critical time.



Remove Restriction on Center EPO Spending

▶ Recommendation

- ▶ If the mission team, along with the office of education, determine that an educational initiative is in the best interests of the mission, and can identify funding from non-educational budget funds, they should have the authority to spend those funds for that purpose.

▶ Reason

- ▶ Citizen science, participatory exploration, and public engagement are often critical mission components of a mission. If funds can be identified within the confines of the budget, mission teams (in coordination with the office Education) should be able to spend their budgeted funds on the activities that they feel best support the mission.

▶ Consequences of No Action

- ▶ Prohibition on the use of available non-education budget funds for public outreach activities unnecessarily further cripples the ability of NASA to engage the public in the way that it uniquely can.



NASA Asteroid Initiative

- ▶ **Planetary Defense**
 - ▶ “the first step on a journey of 1,000 miles”
 - ▶ Detection is the first step
 - ▶ Don’t oversell
 - ▶ Full defense capability may not exist for decades
- ▶ **Stepping Stone to Mars**
 - ▶ Mars is our ultimate goal
 - ▶ Presidential Commitment in the 2030s
 - ▶ Asteroid is an affordable “stepping stone”
- ▶ **Technological Advancement and global leadership**
 - ▶ Testing of numerous new technologies
 - ▶ Object detect, capture, relocate
 - ▶ Deep space EVA
 - ▶ Solar electric
 - ▶ Bulk Xenon purchasing skills

