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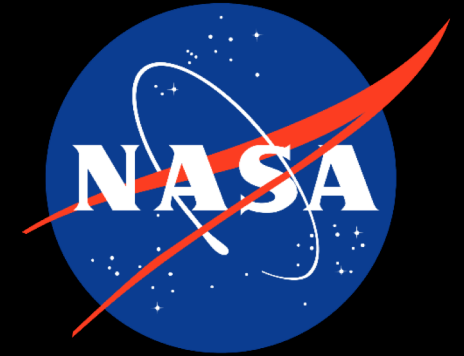
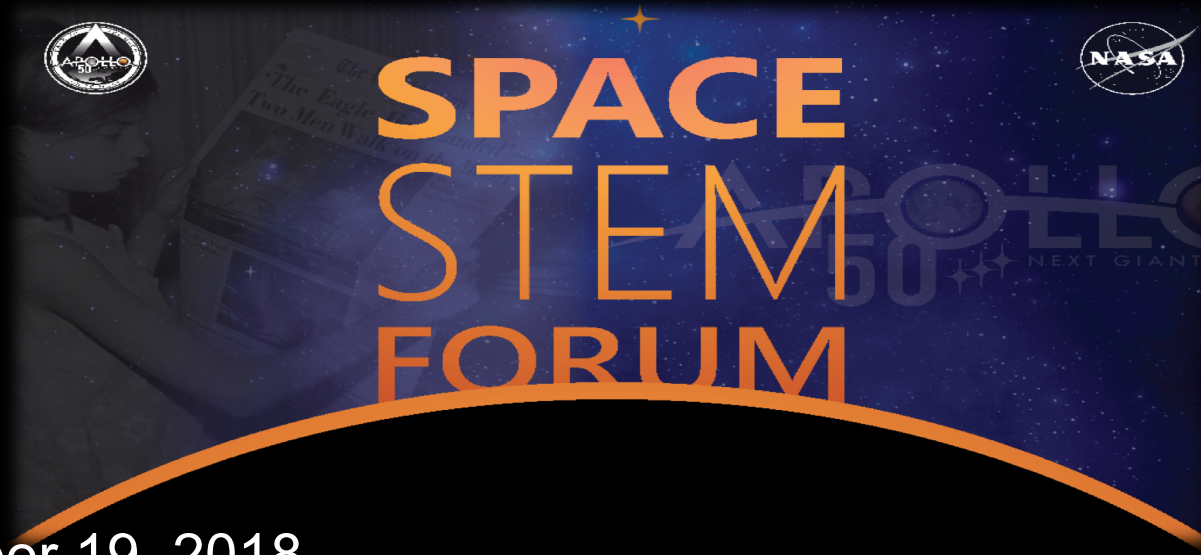
The Next Generation of Explorers



SPACE STEM FORUM UPDATE

Dec. 4, 2018

BEVERLY GIRTEN



Space STEM Forum:

NASA HQ – September 19, 2018

Theme:

Small Steps to Giant Leaps, Looking Forward to the Future of Space Exploration

Purpose:

Identify opportunities to collaborate and leverage individual STEM engagement activities and efforts with industry and professional organizations commemorating Apollo's 50th

Abstracts:

Approximately 28 abstracts were selected, 17 involving national efforts and 11 involving resources and capabilities

Website:

Collaborative work website and public website has been created to facilitate implementation of outcomes <https://spacestem.nasa.gov/>

SPACE STEM FORUM



 **Space STEM Forum** Sign up Log in

- Home
- Program Information
- Small Steps to Giant Leaps
- Events and Exhibits
- STEM Engagement
- NASA Home
- Museum Alliance



Space STEM Forum Launches Collaboration
Leading organizations met in the fall of 2018 to initiate plans for collaborative STEM engagement activities in celebration of the 50th anniversary of the Apollo 11 lunar landing, and the future of NASA exploration. Stay tuned to this site!



PROGRAM INFORMATION
Get to know the Space STEM Forum, and how to use its resources to enhance student understanding and engagement.



SMALL STEPS TO GIANT LEAPS
Look forward to the future of space exploration through these educational initiatives.



MAP OF EVENTS AND EXHIBITS
Nationwide opportunities to learn about Moon missions - past, present and future!



STEM ENGAGEMENT
Explore STEM engagement and education materials for learners of all ages.



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SPACE STEM FORUM PARTNERSHIPS

Post Space STEM Forum:

Various initiatives started collaborative planning while others have had follow-up collaborative meetings

Progress on NASA-led SSF initiatives:

Night At A Museum

- Two webinars with Museum Alliance (MA) members (>100)
- Call went out to begin collecting MA Alliance events for Apollo 50th
- Evaluating 8 locations to identify best anchors sites for July 19-20
- Biweekly telecons set up; work on learning modules has started





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National Moon Day and Night at a Museum

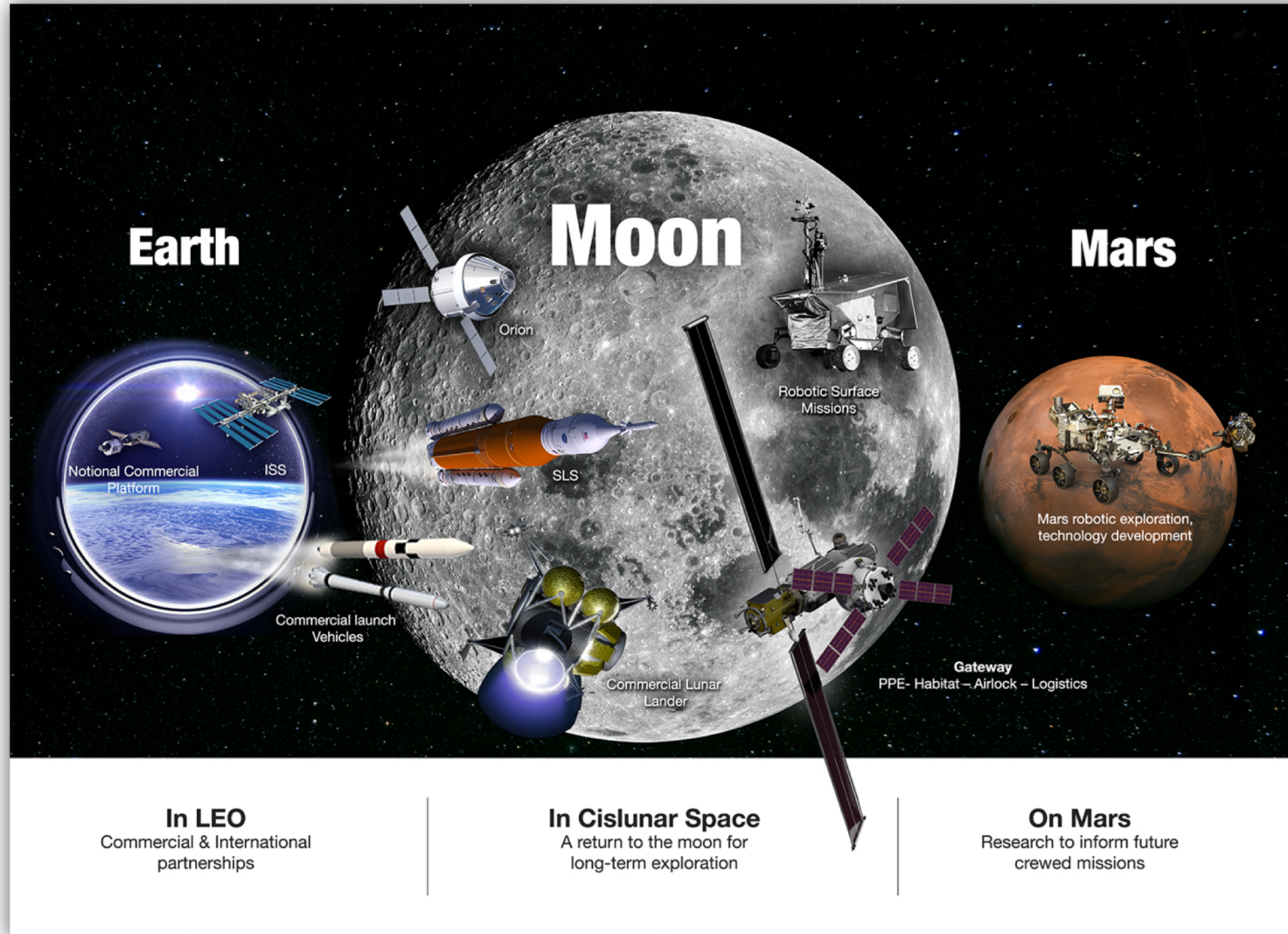
Leslie Lowes, Jet Propulsion Laboratory

Partners:

Kris Brown and Beverly Girtten, NASA OSE

Amelia Chapman and Kevin Frank, JPL

Thematic Concept



Exciting events of July 16-24, 1969 are viewed, re-enacted and celebrated 50 years later, including when man first stepped foot on the moon on July 20.

Exhibits and activities for students “looking forward” highlight plans allowing the return humans to the moon, establish a lunar gateway and have humans land on Mars for the first time.

Participants and work schedule

Organizations

- ASTC
- Arizona State University
- Challenger Center
- Children's Museum of Indianapolis
- Columbia Memorial Science Center
- Conrad Foundation
- Cosmosphere
- Discovery Center, Bridgeport
- Lunar and Planetary Institute
- Museum of Flight, Seattle
- Museum of Science, Boston
- National Air and Space Museum
- National Park Service
- Orlando Science Center
- Saint Louis Science Center
- Space Foundation
- U. S. Space and Rocket Center
- ScienCenter

Schedule

- Bi-weekly meetings through December
- Monthly/as needed in New Year
- Plan to roll out initiative in winter 2019

A Foundation for Museum Events

Key resources for this initiative:

- **NASA 2-hour broadcast** on July 19, 2019 in the afternoon Eastern Time. (July 20 other broadcasts are going on, including day-long event at NASM)
- **Common unique activity** that NASA can provide for museums to incorporate into museum events – focus on connection to past and future exploration of the Moon and Mars.
- To enable the widest possible participation by museums, gather a **collection of activities and resources suitable for the weekend celebration**, as well as best practice tips for hosting special events.



- Explore other options for **connecting together what museums** are doing that weekend.

Broadcast and Anchor Museums



NASA Office of Communications broadcast

- July 19, 2019 afternoon ET. From Museum of Flight, JSC, KSC, MSFC + others

Potential Anchor Sites for filming/broadcast

- Children's Museum of Indianapolis, IN
- Columbia Memorial Space Center, Downey CA
- Cosmosphere, Hutchison KS
- Discovery Center, Bridgeport CT
- Museum of Flight, Seattle WA
- Museum of Science, Boston MA
- Orlando Science Center, FL
- St. Louis Science Center, MO

Common Learning Module + Resource Inventory

- Inventory of initiative member institutions' existing/planned 50th anniversary-related resources that can be widely.
- Content: Inventory showed good complement of Moon observing, lunar science and launch activities.
Revealed need for **activity related to lunar exploration and connection to Mars.**
- Status: still in information gathering-mode.



Connecting Museums Nationwide



- Create/collection kit/tips for successful festivals/family engagement special events.
- ASTC to poll members about their 50th anniversary plans and needs. Museum Alliance membership will also be polled.
- Investigating possibility of broadcast/sharing of simultaneous events during July 16-24 period.

SPACE STEM FORUM PARTNERSHIPS

National Space STEM Challenge

- ProjectBoard being considered for registration and award platform (SAA)
- Over a dozen organizations are involved in developing Challenge approach
- Telecons held; biweekly telecons being set up
- Concepts for points, awards and creation of avatars are being considered

Forward to the Moon Initiative

- New NASA initiative to be presented at Dec. 12 SSF
- Celebrate Apollo Anniversary and the Next Giant Leap





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Space STEM Forum

Forward to the Moon Initiative

Beverly Girtten

Forward to the Moon, Not Just Returning to the Moon



How is moon exploration today different from what the U.S. did 50 years ago?

When discussing U.S. return to the moon the Jim Bridenstine, NASA Administrator has emphasized:

*We don't use the word return — we are moving **forward to the moon** — sustainably.*

September 27, 2018

Bridenstine would like every man, women and child in America to understand the difference.



THE NEXT GIANT LEAP



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Moving Forward to the Moon Initiative



Celebrating Apollo and Moving Forward to the Moon and on to Mars ***Learning Module Components***

K-6: *Moving Forward to the Moon* activity pad and NPS Nightsky Insert

7-9: Lesson plans/activities for class, museums, youth organizations

9-12, Teachers, Parents: Toolkit folder with age specific games & resources

Topics Covered in Learning Modules

Apollo Historic

Apollo 8 Earthrise

Apollo 11 1st manned landing

Eagle, LEM, Tranquility Base

Moon2Mars (M2M)

SLS and Orion

Lunar Gateway

Sustainability and M2M



**EXPLORE
MOON_{to}MARS**
Space Launch System



Moving Forward to the Moon initiative



Celebrating Apollo and Moving Forward to the Moon and on to Mars with

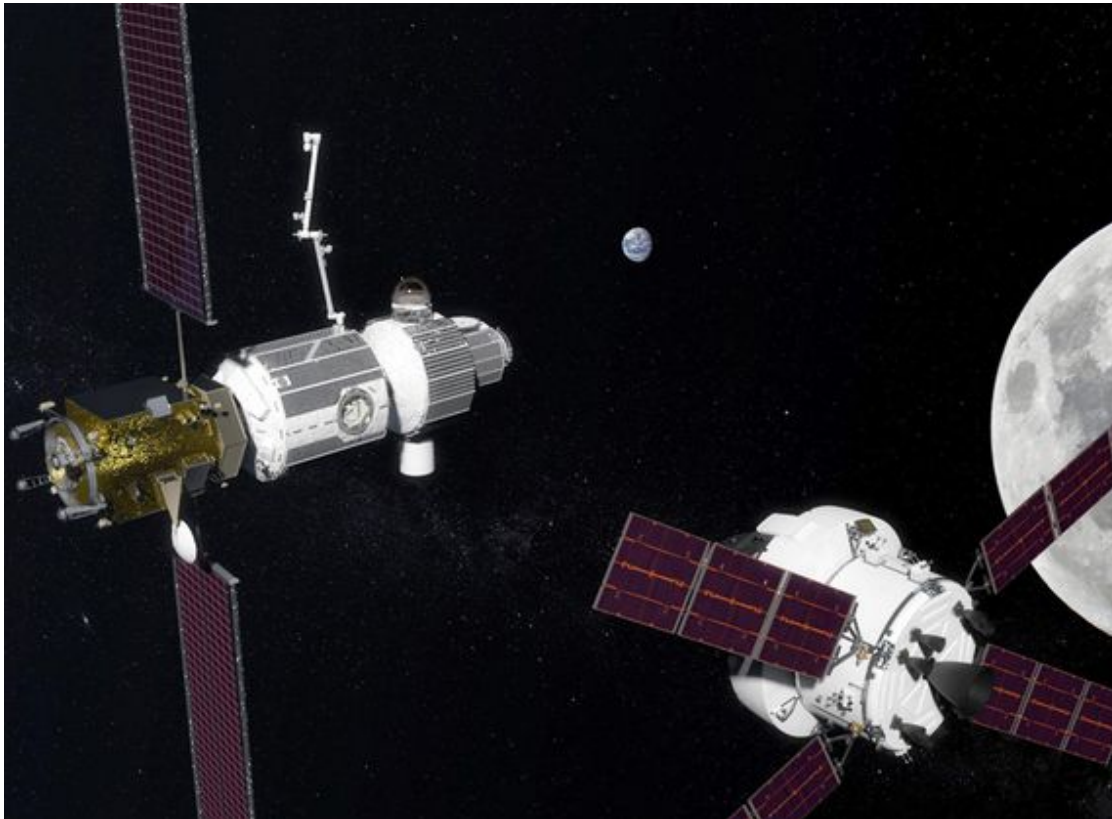
Potential uses of ***Moving Forward to the Moon*** material:

- Use with learning modules in schools and at Anniversary events (Jamboree)
- Send your name to the Moon with NASA (boarding pass, microchip)



THE NEXT GIANT LEAP

**Forward to the Moon,
sustainably, and on to Mars**



Gateway: Lunar Orbiting Platform-Gateway



The lunar Gateway will act as a shortcut to Mars



SPACE STEM FORUM PARTNERSHIPS

Progress on Other SSF Anniversary Initiatives:

US Space and Rocket Center (USSRC)

- Several collaborations formed from SSF (NPS, Boeing, Space Grants)
- 36' Saturn 5 rocket (1:10 scale) will be refurbished and launched
- OSTEM working on providing live video streaming capability
- Collaborating with Boy Scout World Jamboree; rocket/50th patch

Boeing making good progress on anniversary plans

- NASA & Boeing SAA abstract will be submitted this month
- Working with Team II winners on Beyond the Moon kit expansion
- Boeing now working with USSRC rocket launch event

Second Meeting: November 14, 2018 (virtual)

Several other organizations will join the next SSF meeting on Dec. 12



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