

NISE Network Online Workshop

Big or Small, Make Your Apollo 50th Anniversary
Celebration Events a Moonshot!



May 14, 2019

Welcome!

Today's presenters are:

- **Andrew Shaner** – Lunar and Planetary Institute
- **Amelia Chapman** – JPL/ NASA's Museum Alliance
- **Darrell Porcello** – Children's Creativity Museum
- **Ruth Watt** – Saint Louis Science Center, MO
- **Rachel Quimby** – EcoTarium, MA
- **Lucien Scott** – Creative Discovery Museum, TN



As we wait to get started with today's discussion, please:

Introduce yourself! Type your name, institution, and location into the Chat Box

Questions? Feel free to type your questions into the Chat Box at any time throughout the webinar or use the raise your hand function in the participants list and we'll unmute your microphone.

Today's discussion will be recorded and shared online at nisenet.org/events/online-workshop

Online Workshop Overview



Image credit: NASA

5 min

Andrew Shaner – Lunar and Planetary Institute



5 min

Amelia Chapman – JPL/
NASA's Museum Alliance



5 min

Darrell Porcello – Children's Creativity Museum



Online Workshop Overview



Image credit: NASA

10 min

Ruth Watt – Saint Louis
Science Center, MO



10 min

Rachel Quimby –
EcoTarium, MA



10 min

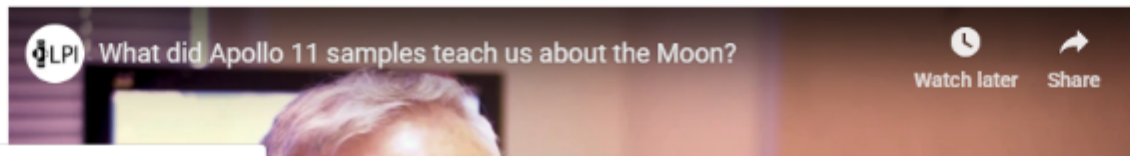
Lucien Scott – Creative
Discovery Museum, TN





- [Past Exploration ▼](#)
- [Future Exploration ▼](#)
- [LPI Resources ▼](#)
- [Other Resources ▼](#)

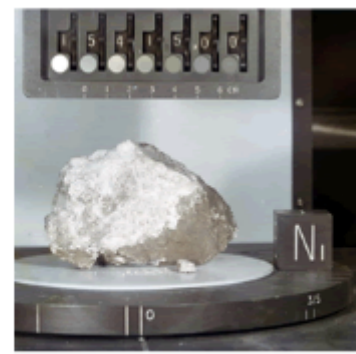
Founded at the height of the Apollo program in 1968, the Lunar and Planetary Institute (LPI) is proud to share our resources with the world as we celebrate the 50th anniversary of Apollo and look to the future. Below are links to LPI's collections of lunar science and exploration resources as well as links to resources available for your Apollo anniversary events.



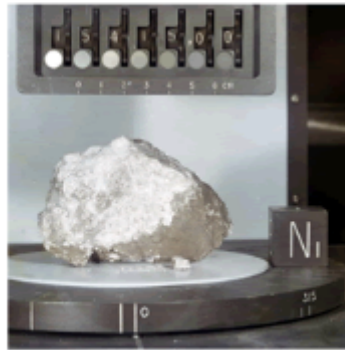
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Looking to the past...



Looking to the past...



Apollo Surface Panoramas

A digital library of photographic panoramas captured by Apollo astronauts while exploring the Moon's surface. These images provide a spectacular boots-on-the-ground view of the lunar landscape.

Digital Lunar Orbiter Photographic Atlas of the Moon

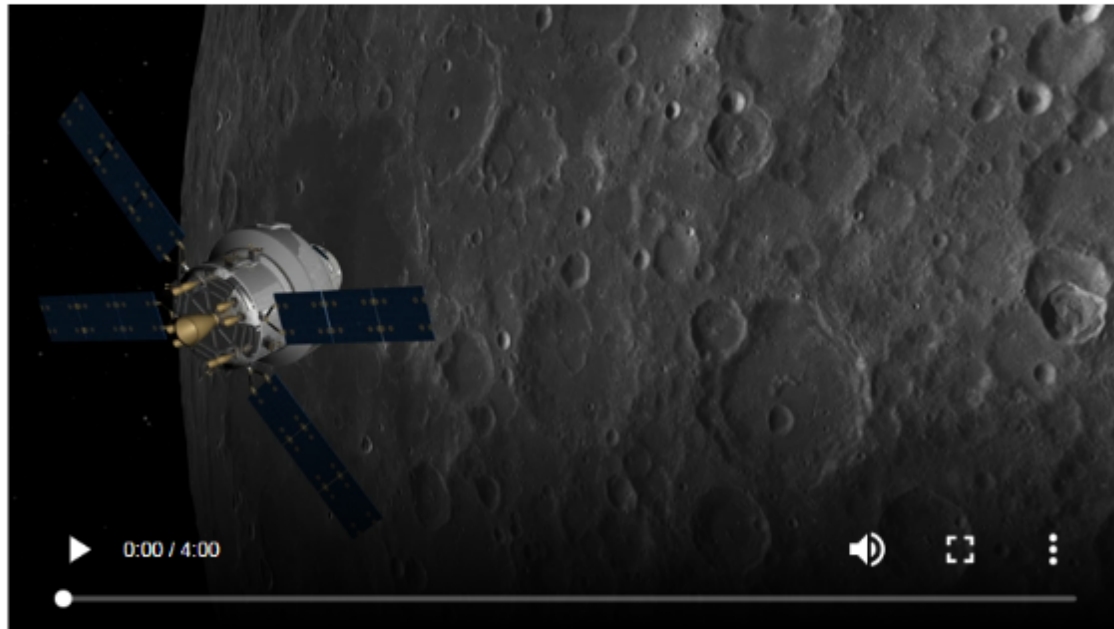
This digital archive contains imagery found in Bowker and Hughes *NASA Special Paper 206*. This online archive offers many improvements upon its original hardbound predecessor including multiple search capabilities to expedite locating images and features of interest. To aid in feature identification, annotated versions of each image are included with the original

Lunar Map Catalog

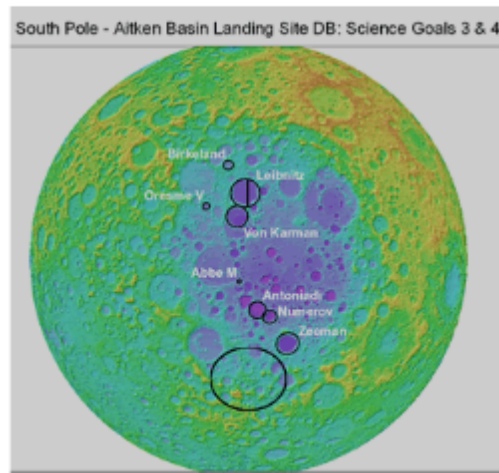
A collection of topographic, geologic, and shaded relief maps and charts of the Moon in a variety of scales.



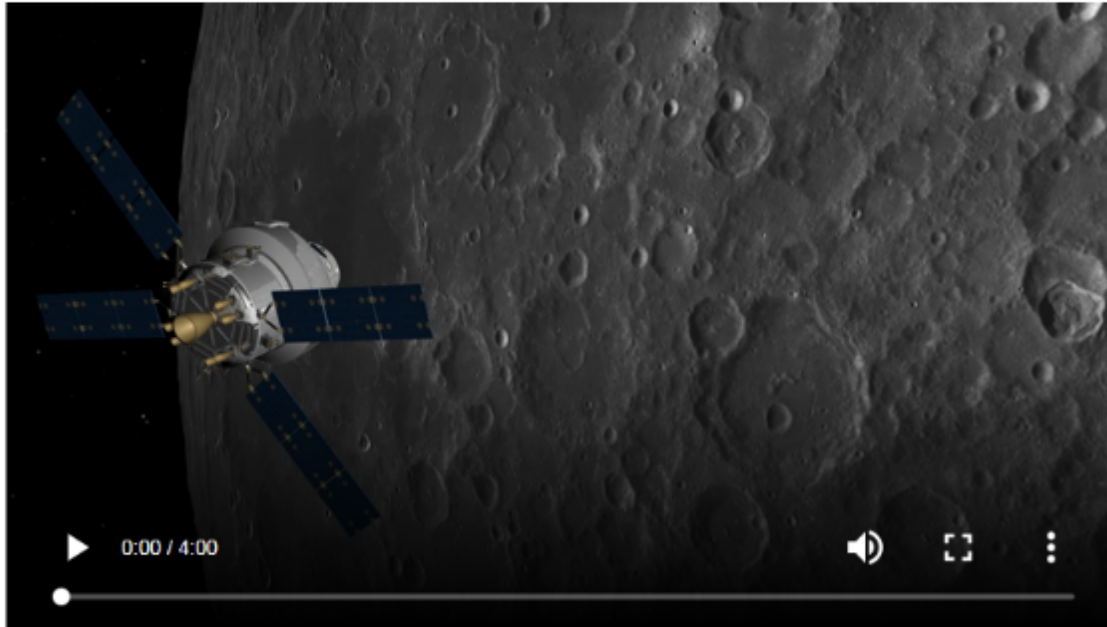
...To Prepare for the Future



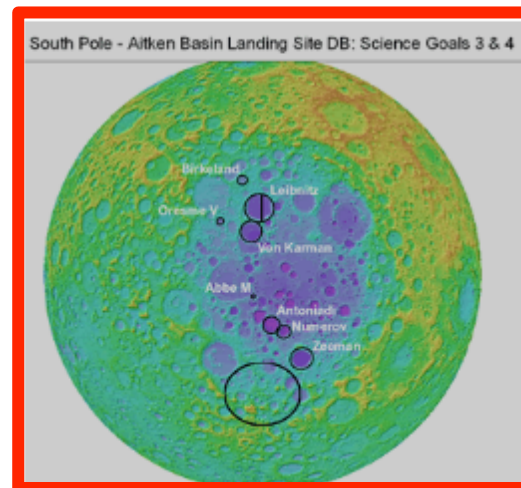
Mission to the Lunar Farside



...To Prepare for the Future



Mission to the Lunar Farside



South Pole - Aitken Basin Landing Site Database

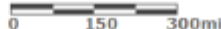
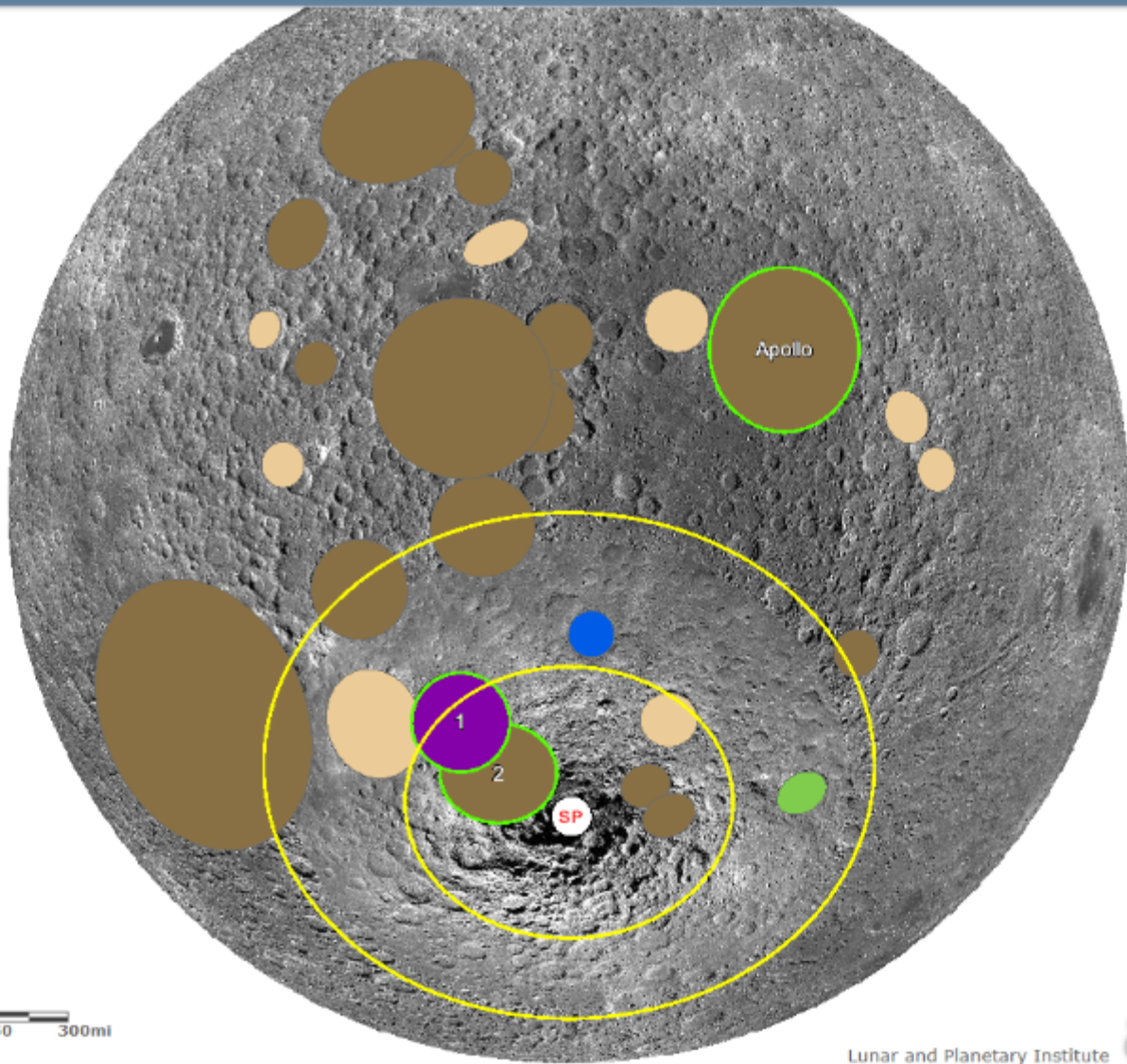
Details Legend Layers Printing

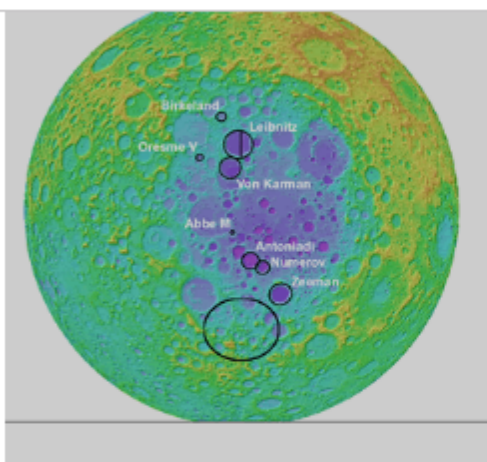
SP_Traverse_Limits
South Pole Traverse Limits
500 km
1000 km
South Pole Location

ScienceGoal_1a
Science Goal 1a: Test the cataclysm hypothesis by determining the spacing in time of the creation of lunar basins.
Crater Diameter > 140km
Pre-Nectarian,
Pre-Nectarian, 2
Pre-Nectarian, Apollo
Nectarian,
Lower Imbrian, 1
Upper Imbrian,
Eratosthenian,
Copernican

Basemap_LROC_WAC
LROC WAC Mosaic
Bright
Dark

+
Home
-
Refresh





Center for Lunar Science and Exploration

The Lunar and Planetary Institute (LPI) and the Johnson Space Center (JSC) have a long and successful history of collaborative research and exploration activities that began with the Apollo program. The LPI and JSC have harnessed that heritage to build the Center for Lunar Science and Exploration to better support our nation's new lunar science and exploration activities.

Solar System Exploration Research Virtual Institute (SSERVI)

NASA created the Solar System Exploration Research Virtual Institute (SSERVI) to address basic and applied scientific questions fundamental to understanding the Moon, Near Earth Asteroids, the Martian moons Phobos and Deimos, and the near space environments of these target bodies.

Moon to Mars

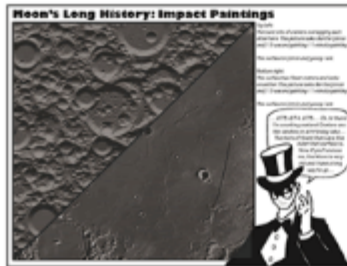
"The NASA Administrator shall, 'Lead an innovative and sustainable program of exploration with commercial and international partners to enable human expansion across the solar system and to bring back to Earth new knowledge and opportunities.'"

Lunar Exploration Analysis Group (LEAG)

The Lunar Exploration Analysis Group (LEAG) was established in 2004 to support NASA in providing analysis of scientific, technical, commercial, and operational issues in support of lunar exploration.



LPI Public Engagement Resources



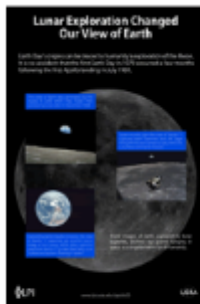
Marvel Moon



Lunar Science and Exploration Poster Set



LPI Library Resources



Apollo-Earth Day Connection Introduction



Apollo-Earth Day Connection Earthrise



Apollo-Earth Day Connection Blue Marble



Apollo-Earth Day Connection Apollo 9



Apollo-Earth Day Connection
Introduction

Apollo-Earth Day Connection
Earthrise

Apollo-Earth Day Connection
Blue Marble

Apollo-Earth Day Connection
Apollo 9

Other Resources



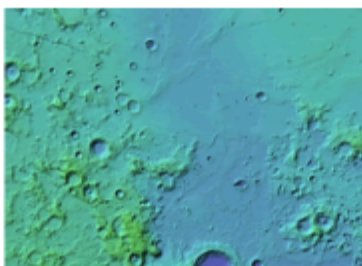
Johnson Space Center
ARES Division



NASA Science: Earth's Moon



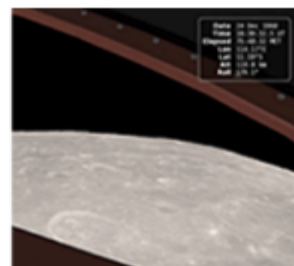
International Observe the Moon Night



Moon Trek



Lunar Reconnaissance Orbiter (LRO)



LRO Visualizations

CONNECT WITH US!



LPI EMAIL NEWSLETTERS

Subscribe to our communications...



QUICK LINKS

CONTACT US



NASA’s Office of STEM Engagement [Education] presents Apollo anniversary resources on two main sites:



NASA’s Museum Alliance provides informal educators access to resources and professional development on *all* NASA topics, including Apollo. Membership is free.



Space STEM focuses on the Apollo anniversary and Moon to Mars. It’s home of NASA’s Apollo anniversary map and calendar. For all audiences, no membership.

- Home
- Team Chat
- My Account Settings
- Member Events
 - Event Submission Form
 - My Events / Report Impact
- Members
- Telecons
- Calendar
- Resources
- Competitive Program
- Aeronautics Research
- Human Exploration and Operations
- Science
- Space Technology



Artists Inspire Astronauts Contest

The astronaut crew quarters at NASA's Kennedy Space Center in Florida are being prepped for the upcoming commercial crew launches, and your artwork could be on display! [Deadline April 30.](#)

| JOIN OUR COMMUNITY | MEET OUR COMMUNITY | EVENTS IN YOUR COMMUNITY | COMPETITIVE PROGRAM |
|---|---|---|--|
| <p>The Museum Alliance brings current NASA science and technology to free-choice learners through professional development of informal education providers and access to NASA staff and materials. More>></p> | <p>Over 1,900 professionals at more than 900 U.S. museums, science centers, planetariums, NASA Visitor Centers, Challenger Centers, observatories, parks, libraries, camps, and youth-serving organizations are partners in the Museum Alliance. More>></p> | <p>From exhibits to planetarium shows to educator workshops to special lectures, Museum Alliance partners present space exploration and aeronautics programs and events for their local communities. More>></p> | <p>NASA Teams Engaging Affiliated Museums and Informal Institutions (former CP4SMPVC) aligns with NASA and Federal science, technology, engineering, and math (STEM) education goals. More>></p> |

Featured Events



Webinar- Mars in May
Thursday, May 2, 2019



"Star Wars" Day
Saturday, May 4, 2019



Mission Patch Competition
Sunday, May 5, 2019

Museum Alliance

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MEET OUR COMMUNITY

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Deep dive of Apollo 50th Anniversary Resources for Informal Educators

Website: [Space STEM Forum Apollo 50th resource page](#)
[Apollo 50th anniversary landing page](#)
[Apollo 11 NASA Mission Report](#)
[2017 Article and videos](#)

This page may contain some non-NASA content. Please note that NASA does not endorse nor verify third party content. These are simply a sampling of available resources, and we encourage you to search for more on your own. Any opinions, findings, conclusions, or recommendations expressed in third party materials are those of the authors and do not necessarily reflect the views of NASA.

last updated: 5/1/2019 - Added [Apollo postcards and book recommendations](#), Live talks from [NASA Wallops and Johnson](#), as well as [Mission Patch Design activity](#), and [two new activity booklets](#). **Newest updates are highlighted**

- [#exhibits and planetarium shows](#) - includes instructions on how to obtain and make exhibits, artifacts, models, etc.
- [#info and media](#) - includes websites, images, audio, and general information
- [#telecons and presentations](#) - includes ready-to-use presentations and recordings from NASA experts
- [#movies/videos](#) - includes movies/video products
- [#education](#) - includes curriculum, activities, and tools for use in hands-on learning

Whatever you do, be sure to share it using the quick and easy [Museum Alliance event form](#). It will not only show up on our map, but will also show up on the [Space STEM Forum map](#), NASA Education's dedicated Apollo 50th anniversary event page.

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Museum Alliance @amelia_j_chapman

- Search
- Notifications
- Task Stream
- Personal Tasks

FORUMS

- Apollo 50th Conversations**
- General Conversation
- Tasks and Requests

TEAMS

- General Conversation: N...

PEOPLE

- General Conversation: N...

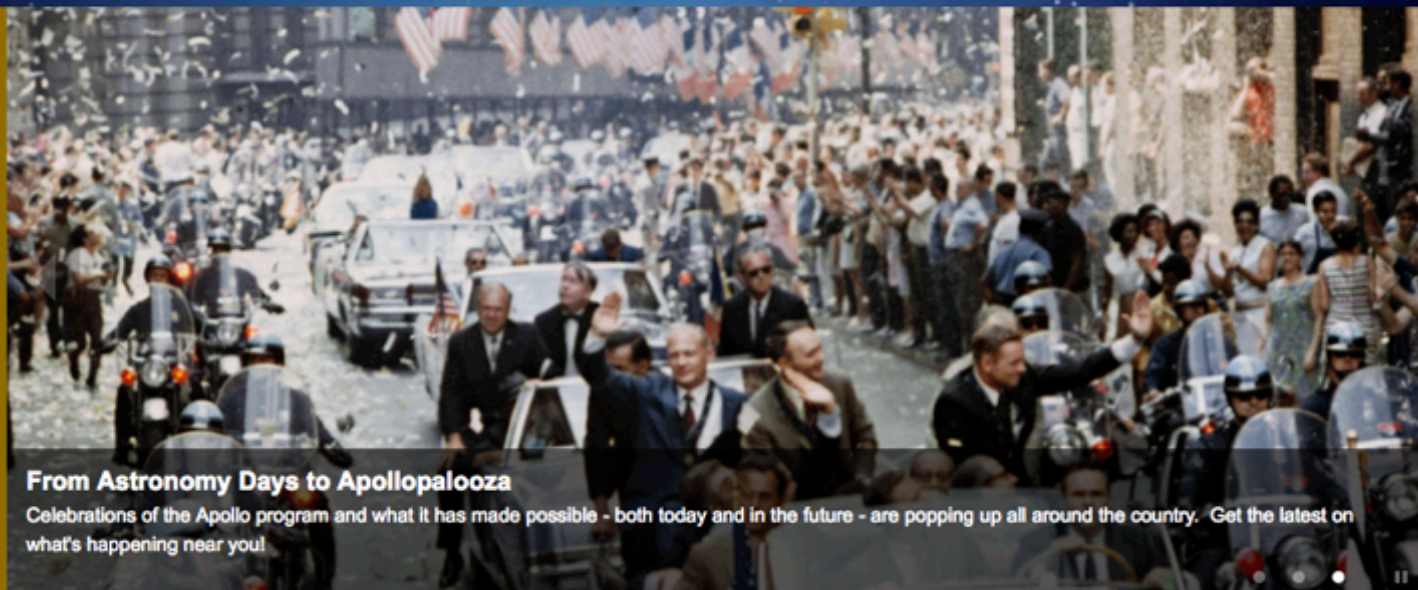
Apollo 50th Conversations

CHAT TOPICS

- Resources/websites**
Amelia Chapman created Mar 25
- Add a new topic by clicking the "+" towards the top right**
Jeff Nee created Mar 7
- For Air and Space Museums - top 3 activities and resources**
Jeff Nee created 3 days ago
- From the Moon to Mars - Apollo 50th Planetarium Show**
Jeff Nee replied 4 days ago 1 5
- "Why the Moon?" Recorded Talk with Noah Petro**
Jeff Nee created 4 days ago
- Apollo 50th handouts and printables**
Amelia Chapman replied 6 days ago 8 1
- People of Apollo**
Jeff Nee replied 14 days ago 4
- Moon Resources From NASA eClips**
Sharon Bowers created 20 days ago
- Library hands-on activities**
Stephanie Vierow-Fields replied 24 days ago 7
- Moon to Mars - Mars 2020 Presentation Slides**
Jancy replied 26 days ago 1 5
- Moon-themed - International Humans in Space Youth Art Competition**
Jancy replied 26 days ago 2 8
- Share Favorite Images**
Jeff Nee replied 27 days ago 3
- Apollo Next Giant Leap Student Challenge (ANGLes Challenge)**
Jeff Nee replied 28 days ago 4
- NISE Network Online Workshop: Big or Small, Make Your Apollo 50th Anniversary Celebration Events a Moonshot!**
Brad Herring replied 28 days ago 2
- Apollo related Planetarium Shows**
Jeff Nee replied Apr 4 3
- Apollo 11 Temporal Map exhibit mode!**
Jeff Nee created Apr 4 1
- Global Launch - US Space and Rocket Center**
Children's Museum of Brownsville replied Apr 4 1 4
- Earth from Space Postcards**
Jeff Nee created Apr 3 1



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From Astronomy Days to Apolopalooza

Celebrations of the Apollo program and what it has made possible - both today and in the future - are popping up all around the country. Get the latest on what's happening near you!



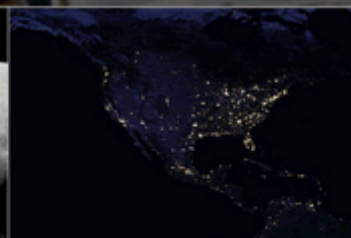
FORUM INFORMATION

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!

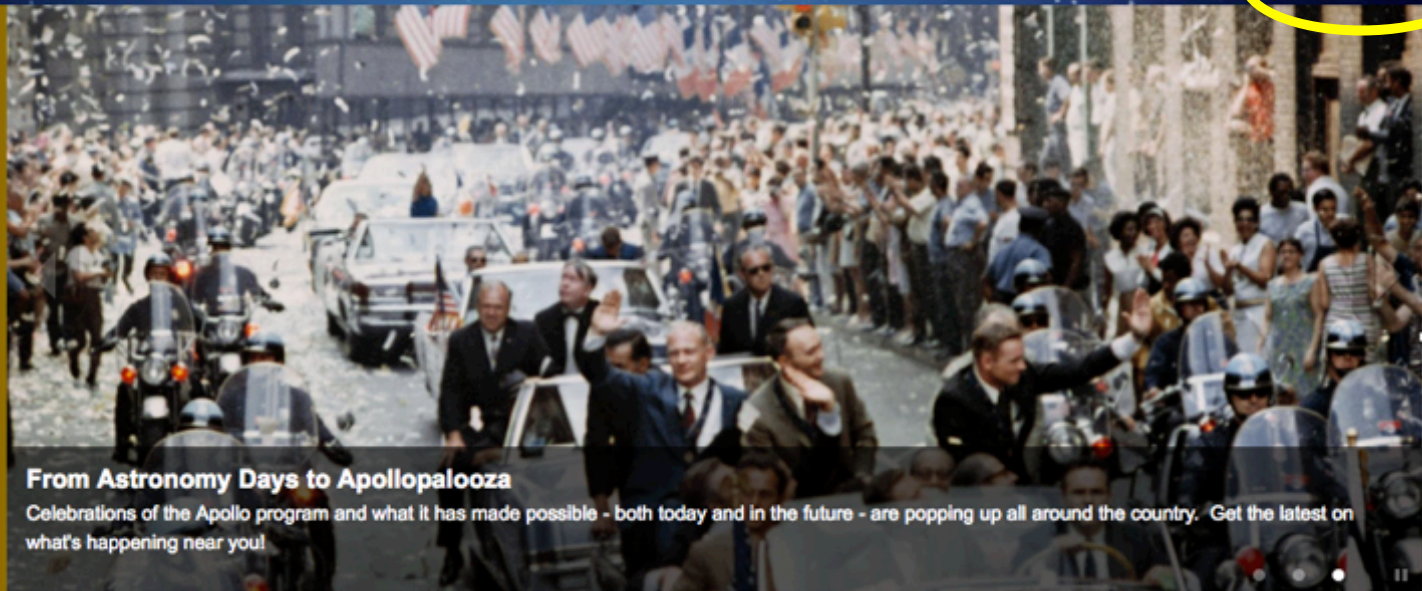


RESOURCES

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



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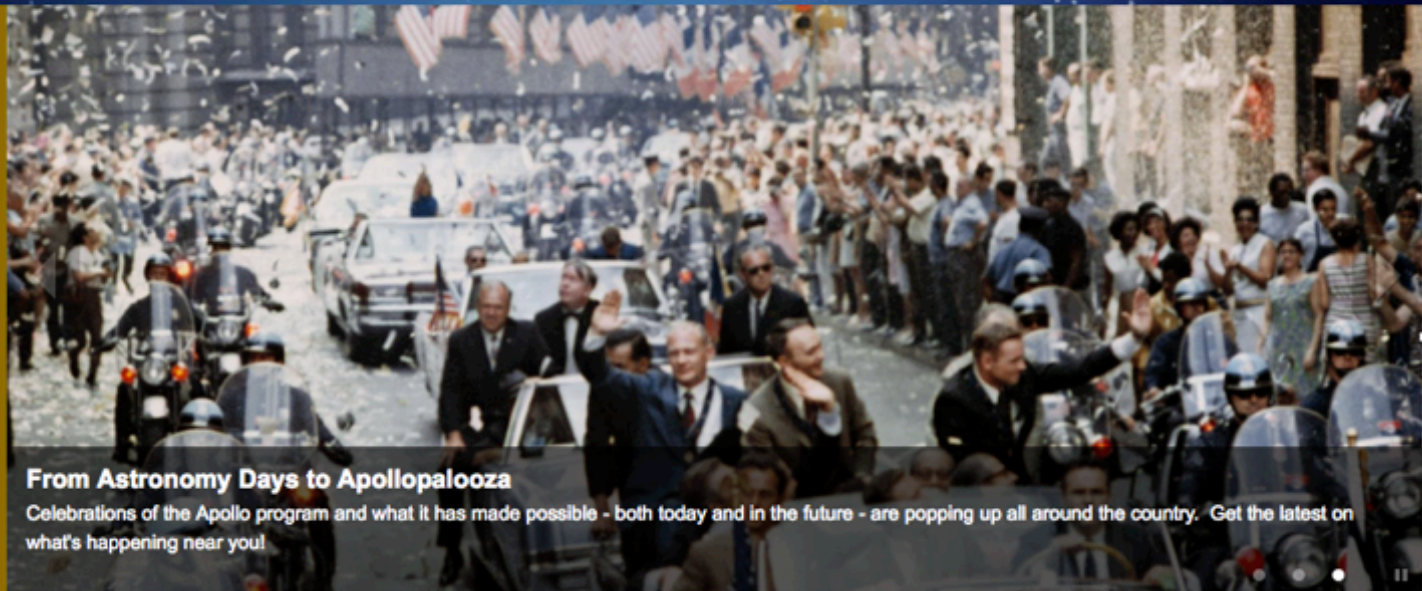
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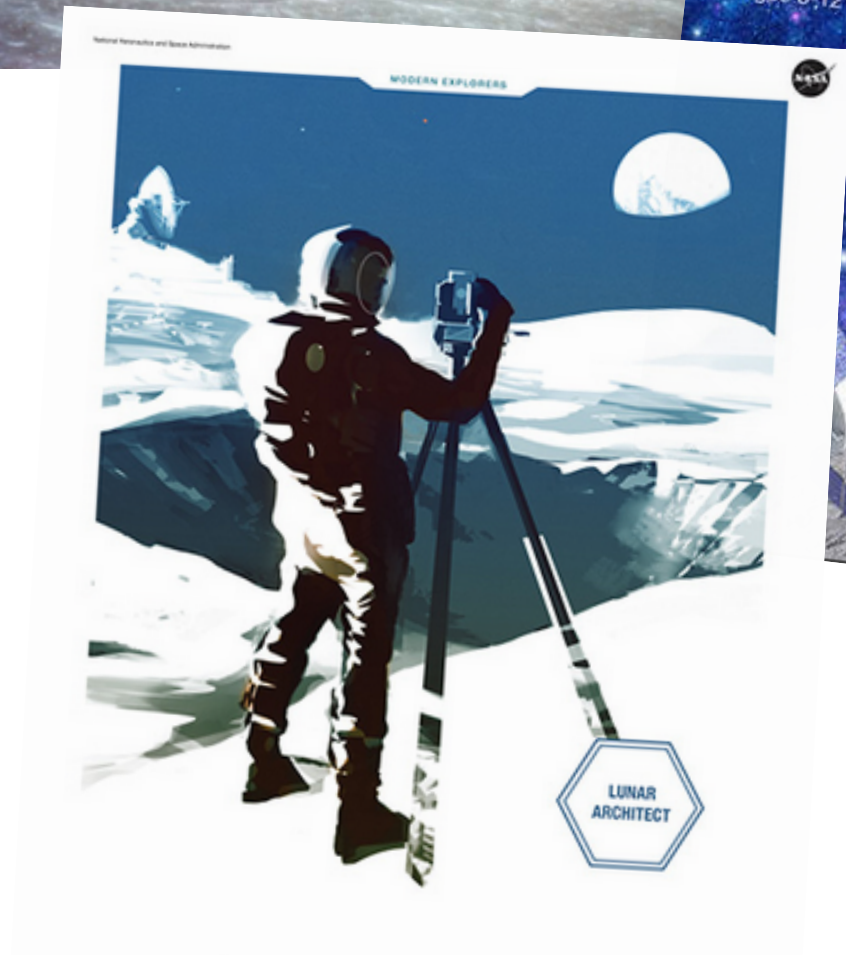
Resources

The [NASA Office of STEM Engagement](#) offers great resources on all NASA topics; for anniversary content be sure to check out the [NASA Apollo 50th website](#). We've also collected some other key sites to help you:

[Apollo Info / Original Sources](#)[Images / Audio / Video](#)[Lessons / Activities](#)[Printables](#)[Our Moon](#)[Contests and Challenges](#)









JUNIOR RANGER
Spaceflight Explorer
Explorer's Activity Guide
AGES 5 TO 12



National Aeronautics and
Space Administration

Forward to the Moon

EXPLORER ACTIVITIES
Ages 5-12



MODERN EXPLORERS



LUNAR ARCHITECT





JUNIOR RANGER
Spaceflight Explorer
Explorer's Activity Guide
AGES 5 TO 12

National Aeronautics and Space Administration

Forward to the Moon

EXPLORER ACTIVITIES
Ages 5-12

A photograph of a space station or satellite in orbit against a starry background.

MODERN EXPLORERS

A photograph of an astronaut in a white space suit standing on the moon's surface. The astronaut is holding a camera mounted on a tripod. The Earth is visible in the sky.

LUNAR ARCHITECT

EXPLORE STEM

INSPIRE • ENGAGE
EDUCATE • EMPLOY
The Next Generation of Explorers

nasa.gov/stem

EXPLORER

MOON to MARS

FORWARD to the Moon... Then

APOLLO 11

NEXT GIANT

nasa.gov/apollo11



Forward to the Moon

EXPLORER ACTIVITIES
Ages 5-12

NEXT STOP: THE MOON!

To create a sustainable lunar outpost, people living and working on the Moon will learn to live off the land, using local resources in place of materials from Earth...

FIGURING OUT WHAT'S WHERE

Scientists collect satellite data about the materials on the Moon's surface. They determine how to better understand the amount of iron, aluminum, and other resources. They also determine where to find other resources. Using this information, scientists and engineers can plan future missions and search sites for resources. What resources does the Moon offer and how will we use them?

Solar Energy - A Renewable Resource

Solar energy coming to Earth also can be collected, stored, and used to power the systems, including energy for lighting, instruments, and the rovers. The Lunar Energy Resource Center has the Moon's solar energy resource available for even longer periods.

Soil Solutions

Scientists recently have analyzed the Moon's soil and created a list of lunar "soil" resources. The lunar "soil" can be a useful resource. Astronauts can use lunar soil to make breathable air. They can also use lunar soil to make water. They can use lunar soil to make building materials. They can use lunar soil to make other things.

Water at the Poles?

Data from spacecraft missions suggest that water ice may exist at the Moon's poles. Because the Moon and the other planets in the Solar System never reach the bottom of daily cycles, they are permanently dark and very, very cold. Water ice, perhaps delivered by comets, may be trapped in the craters. Water is an important resource for future missions. It can be used for drinking, but also because hydrogen and oxygen, the elements that make up water, can be separated and used to make spacecraft's fuel. The oxygen can also be used to make breathable air.

Metals From the Moon

Iron and aluminum, important parts of the Earth, are also found on the Moon. They can be used to make building materials, tools, and other things.

Reduce, Reuse, Recycle

Astronauts need to use their resources carefully. Bringing materials from the Earth to the Moon will be expensive. Using what they bring on the Moon, including the tools and technology, will help. Recycling, reusing, and repairing will be important. They will need to make their own tools and equipment.

By living and working on the Moon, we will develop the skills and technology we need to explore our Solar System.

TO THE MOON AND BEYOND

NASA
National Aeronautics and Space Administration



EXPLORE STEM
INSPIRE • ENGAGE
EDUCATE • EMPLOY
The Next Generation of Explorers
nasa.gov/stem

FORWARD to the Moon... Then

APOLLO NEXT GIANT

MOON to MARS

EXPLORER

NASA
National Aeronautics and Space Administration
nasa.gov/spaceschools/apollo2008

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Images/ Audio/ Video

Key collections:

| | |
|---|--|
| Apollo 50th Gallery | Videos from and about Apollo 7-17, audio highlights from each day of Apollo 11, plus photos. |
| NASA Image and Video Gallery | Enter a search term (e.g. "Apollo 11") for a comprehensive collection of NASA images |
| Apollo image Archive | Digital archive of all the original Apollo flight films |
| NASA's Apollo Pages/ Apollo 11 HD videos | Restored Apollo 11 videos of key moments |
| Apollo Audio and Movie Segments | Some key moments from multiple missions, including lift offs and Apollo 11 landing ("The Eagle has landed") |
| NASA's Apollo Pages/ Image gallery | This collection of mission images isn't searchable, but many iconic photos can be found in the first few pages |
| NASA's Apollo Pages/ Video gallery | Like the Image Gallery, it's not searchable but you don't have to scroll very far to find key videos |
| Human Exploration and Operations/Year of Human Exploration | Graphics files for NASA 60th and Apollo 50th seals, banners and logos |
| Lunar Reconnaissance Orbiter Camera | Some of the most requested LROC images, including images of the Apollo landing sites |
| NASA Regional Planetary Image Facilities - Imagery and Maps | Pictures of and from the Moon |
| NASM's The Apollo Program Multimedia Gallery | Photos, patches, and diagrams |

Some featured images:



Apollo 11 crew, left to right: Neil A. Armstrong, Commander; Michael Collins, Module Pilot; Edwin E. "Buzz" Aldrin, Lunar Module Pilot.



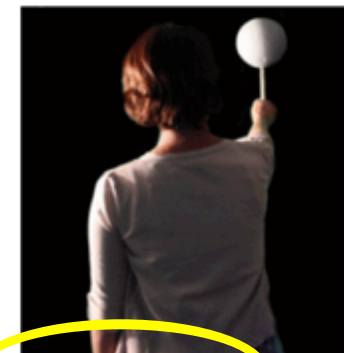
The 363-foot tall Apollo 11 space vehicle launches from Kennedy Space Center on July 16, 1969.



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Lessons and Activities

BY AUDIENCE



BY TOPIC



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Afterschool Enrichment



Suggested Lesson: [World Tales of the Moon](#)

Audio recordings of storytellers sharing myths and folktales from Mexico, Algeria, the Ivory Coast, China and North America.

Full Collection: [Explore Marvel Moon](#)

Discover our scientific, cultural, and personal understanding of Earth's nearest natural neighbor. Explore Marvel Moon will acquaint you NASA's investigations into the ongoing saga that has shaped our Moon. The activities are suitable for children ages 8–13.



Suggested Lesson: [Moon Dance](#)

Full Collection: [Space School Musical](#)

Join teenager Hannah on a trip through the solar system in this "hip-hopera" that uses song and dance to introduce the planets, moons, asteroids and more. Download the lyrics for students to learn and perform or just play the videos in class.



Suggested Lesson: [Life on Mars \(Grow a Garden\)](#)

Children consider the requirements of living things, compare the surface conditions of Mars and Earth, learn about astrobiologists studying life under extreme conditions, and consider the similarities and differences in the type of life that would be possible on Mars as compared to Earth.

Full Collection: [Explore!](#)

Explore provides hands-on space science activities and supporting resources for out-of-school time programs at libraries, camps, museums, planetariums, librarians, and clubs. Use Explore to engage children and pre-teens in the wonders of lunar exploration.



- Home
- Forum Information
- Small Steps to Giant Leaps
- Map: Events/Exhibits
- Submit Event/Exhibit
- Resources
- NASA Home
- Museum Alliance

Events/Exhibits Map



Legend: Event Exhibit Apollo Mars

[View Calendar](#)

Show Events within miles of zipcode: Show: Event name contains:

Mission:

[Submit](#) [Reset all Filters](#)

| Organization | Title | Date | Location |
|--------------|--|-------------------------|-----------------------|
| | Science on Screen: First Man with former astronaut Jeffrey Hoffman | 05-06-2019 | Boston, Massachusetts |
| | Lunar Legacy Lecture Series | 05-08-2019 | Flagstaff, Arizona |
| | NASA Visits Lebanon | 05-09-2019 - 05-11-2019 | Lebanon, Ohio |
| | Astronomy Night | 05-10-2019 | Wallops, Virginia |

Museum of Science, Boston

On the heels of their six-time Academy Award-winning smash, La La Land, Oscar-winning director Damien Chazelle and star Ryan Reynolds return for First Man, the riveting story behind the first manned mission to the Moon, focusing on Neil Armstrong and the decade leading to the historic Apollo 11 flight. A visceral and intimate account told from Armstrong's perspective, based on the book by James R. Hansen, the film explores the triumphs and the cost — on Armstrong, his family, his colleagues and the nation itself — of one of the most dangerous missions in history. Before the film, former NASA astronaut Jeffrey Hoffman will discuss the legacy of Apollo 11 and share his personal memories of Neil Armstrong.

Coconino Community College
Lone Tree Campus

Lunar Lecture: Recognizing Flagstaff's Apollo Training Sites Learn about the historical significance of Flagstaff's Apollo training sites on Wednesday, May 8 as part of the Lunar Legacy Lecture Series at Coconino Community College Lone Tree Campus. Ian Hough and Ben Carver explore the historical significance of Apollo astronaut training sites at Cinder Lake and Sunset Crater Volcano National Monument as well as the process of placing these areas on the National Register of Historic Places. This FREE 18-month speaker series celebrates the Apollo Moon Missions and Flagstaff's critical role in these historic lunar landings. Join us at 6 p.m., the second Wednesday of every month at the Coconino Community College Lone Tree Campus.

Warren County Historical Society

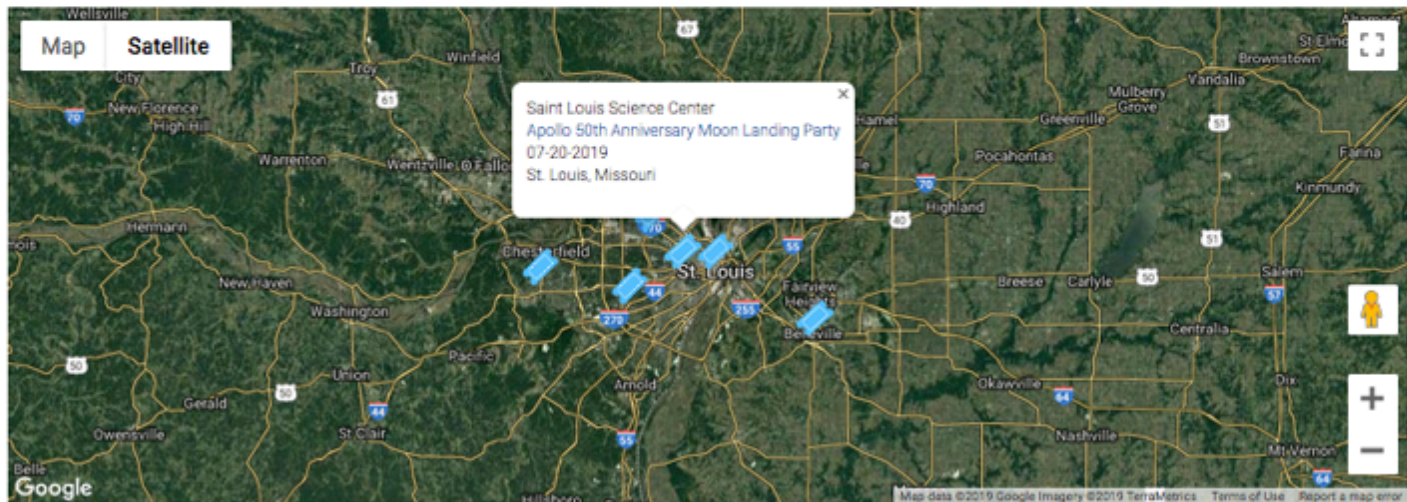
In honor of Neil Armstrong's historic walk on the moon, NASA will be visiting Lebanon (Armstrong's long time home) with a series of events in Harmon Museum, Lebanon Conference Center and the Lebanon Public Library. With a planetarium, talks by astronaut, and genuine Moon rocks, this is a must for any outer space fan.

NASA WFF Visitor Center

The NASA Wallops Flight Facility Visitor Center and its partner the Delmarva Space Sciences Foundation will host an Astronomy Night event from 7:30 to 10 p.m. on Friday, May 10. This event begins with an astronomy presentation in the Visitor Center's auditorium at 7:30 p.m. followed by night sky observations through high-powered telescopes operated by the Delmarva Space Sciences Foundation on the grounds of the Visitor Center from 7:30 p.m. until 10 p.m. Drop-in, hands-on space science activities, videos, and astronomy resources will also be available from 8 – 9 p.m. The astronomy presentation and indoor activities will take place regardless of the weather conditions. However, the telescope viewing is subject to cancellation due to inclement weather. The event is free and open to the public. Doors open at 7:15 p.m.

[Home](#)[Forum Information](#)[Small Steps to Giant Leaps](#)[Map: Events/Exhibits](#)[Submit Event/Exhibit](#)[Resources](#)[NASA Home](#)[Museum Alliance](#)

Events/Exhibits Map

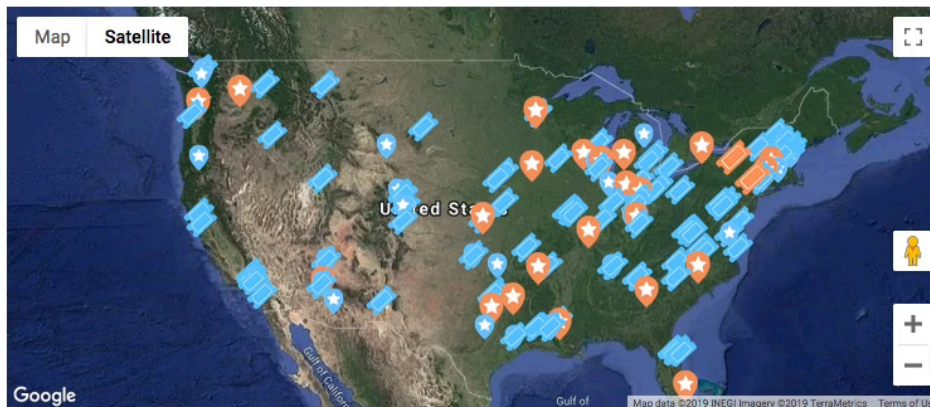


Legend: Event Exhibit Apollo Mars

[View Calendar](#)

[Home](#)[Forum Information](#)[Small Steps to Giant Leaps](#)[Map: Events/Exhibits](#)[Submit Event/Exhibit](#)[Resources](#)[NASA Home](#)[Museum Alliance](#)

Events/Exhibits Map



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| Warren County Historical | NASA Visits Lebanon | 05-09-2019 - 05-11-2019 | Lebanon, Ohio |

How to get on the map:

- **Museum Alliance** members regularly share events on the “Events Near Me” map; relevant Apollo and Moon to Mars items will automatically appear on the Space STEM map and calendar as well.
- **Non-Museum Alliance members** can submit items via the Space STEM site.



NEW BEDFORD
WHALING
MUSEUM



APO110

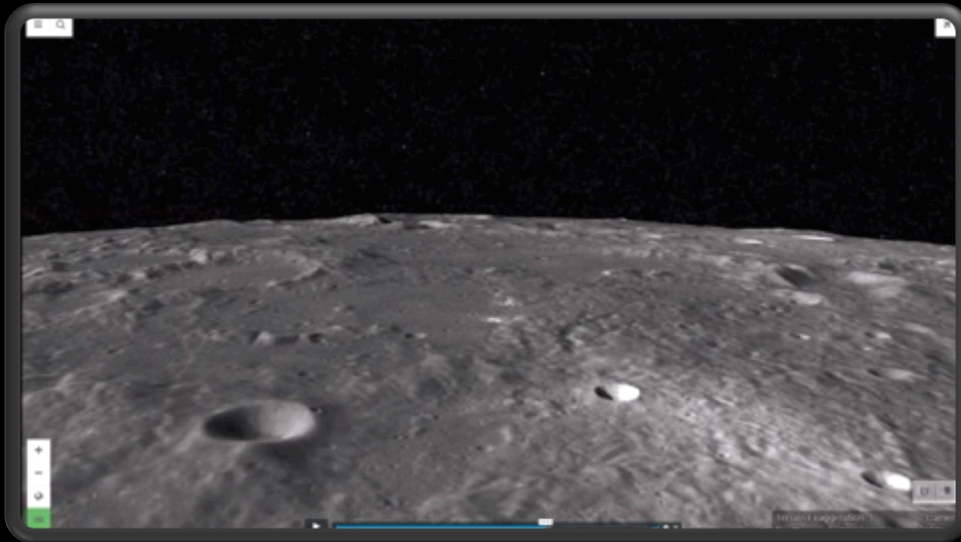
one giant leap
for mankind



Amelia.J.Chapman@jpl.nasa.gov

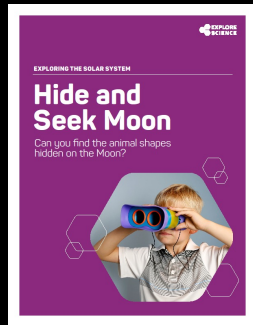
<https://informal.jpl.nasa.gov/museum/>

<https://spacestem.nasa.gov/>



VIDEO - Apollo landing sites visualization produced by NASA's Solar System Trek team
<https://vimeo.com/317054974>

NISE
NATIONAL INFORMAL
STEM EDUCATION
NETWORK



nisenet.org/moon50

The Moon: NASA is Going Back and Looking Forward



Notes: In 2019 we are celebrating the 50th anniversary of NASA's groundbreaking Apollo 11 mission to land the first humans, Neil Armstrong and Buzz Aldrin, on the Moon. This is a time for us to reflect on the amazing achievements of the first Moon landings and look forward to the major role the Moon will play in NASA's future. An estimated 530 million people watched Neil Armstrong's televised image and heard his voice describe the event as he took "one small step for a man, one giant leap for mankind" on July 20, 1969.

Photo

Apollo 11 Mission Image – Astronaut Edwin ("Buzz") Aldrin
<https://moon.nasa.gov/resources/189/apollo-11-mission-image-astronaut-edwin-aldrin/?category=images>
Image credit: NASA/JSC

PRESENTATION - The Moon: NASA is Going Back and Looking Forward
<http://www.nisenet.org/catalog/moon-nasa-going-back-and-looking-forward-presentation>



Books for Story Times and Programs from nisenet.org/moon

Included in the Explore Science: Earth & Space 2019 toolkit, from the Astronomical Society of the Pacific

- [Breakfast Moon](#) picture book by Meg Gower and illustrated by David Barker

From STARnet's [list of Our Moon books](#)

- [Happy Birthday, Moon](#) Asch, F. (2014). Aladdin.
- [Science Adventures with Max the Dog Series](#) Bennett, Jeffrey (2008-2015). Big Kid Science. Grades 2-4; fiction
- [Faces of the Moon](#) Crelin, B. (2009) Watertown, MA: Charlesbridge. Grades 1 – 4
- [Moon Base Alpha Series](#) Gibbs, Stuart (2013-2016). Simon & Schuster Books for Young Readers. Grades 3-7; fiction
- [The Moon and how to observe it](#) Grego, P. (2016). Firefly Books. (ISBN-13: 978-1770857155)
Appropriate for older youth and adults
- [A Moon of My Own](#) Rustgi, Jennifer (2016). Dawn Publications (ISBN-13: 978-1584695738) Grades PreK- 3.
- [Moon: a Peek-Through Picture Book](#) Teckentrup, B. (2018). Random House Children's Books.
- [Phrases of the Moon](#) Lewis, J. Patrick. 2018. [S.I.]: Creative Co.
- [Hello to You, Moon](#) Morgan, Sally. 2018. [S.I.] Little Hare



SAINT LOUIS
SCIENCE CENTER

Connect with curiosity.

Apollo 50th Anniversary
Moon Landing Party

Ruth Watt, Manager of STEM Events

Apollo 50th Anniversary Events

July 12, 2019

- Star Date
- *Magnificent Desolation* showing in Omnimax

July 13, 2019

- Opening of *A New Moon Rises* Exhibition

July 15-19, 2019

- Summer Space Camp

July 20, 2019

- SciFest: Apollo 50th Anniversary Moon Landing Party

SciFest at the SLSC

- Free all-day events connecting the community to STEM content and applications.
- Hands-on experiences and presentations
- Learning from and alongside STEM experts, professionals, and enthusiasts.



SciFest- Apollo 50th Anniversary Moon Landing Party

- NASA anchor site
- Community Partners and Collaborators
 - Using NISE Net Earth and Space Kits to engage the public
- Immersive and commemorative elements



Worcester on the Moon

You can't get to the moon without Worcester!





Robert H. Goddard (1882-1945)

"Father of Modern Rocketry"

Physicist!

Inventor!

Professor!

Inventor!



Esther K. Goddard (1902-1982)

"The woman who worked tirelessly to ensure her husband's legacy didn't just disappear."

Weighed 10
pounds

Liquid oxygen and
gasoline

Rocketed 40 feet in
the air

Flew for 2.5
seconds

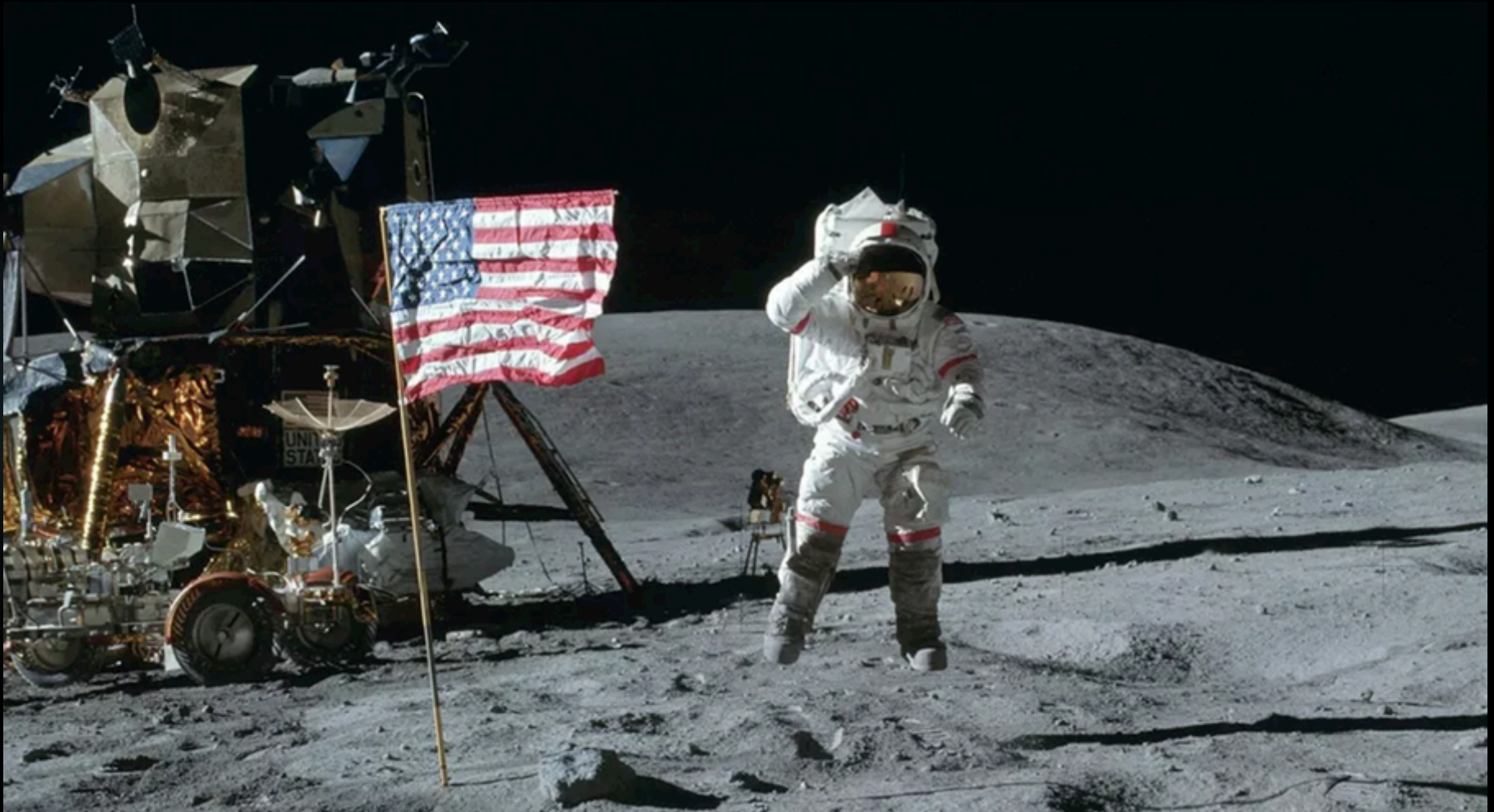


**March 16, 1926. Auburn, MA (Aunt Effie's
Farm)**

Forty-three years later, we were on the moon.

Coincidence?

We think not.



Worcester is home to many major players in astronomy research and space exploration...



The moon landing anniversary is WAY is bigger than any **one** organization.

Why not join forces as a **city** to celebrate a whole **calendar** of events as separate organizations, and then do one **bigger** event on July 20?!



Smaller kick-off events started in March and included:

Let the celebrations commence!



- Proclamation by the **Mayor**
- **Worcester Historical Museum:** Get to know Goddard
- **Worcester Public Library** “Space Story Time”
- **Technocopia** – Air & Rockets programs
- **Clark U:** Goddard Library Celebration



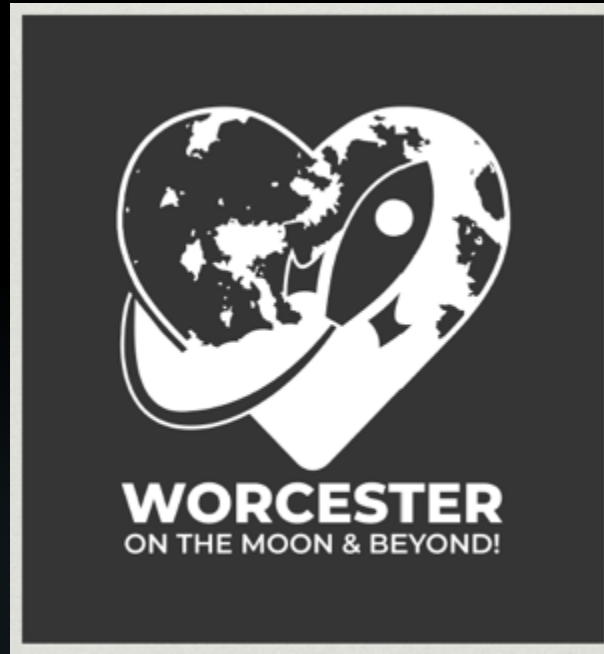
- Rocket Day (March 9)
- Explore Space Day (April 6)
- Lunar Libations (May 17)
- Lunar Launch (July 16)





Worcester on the Moon

July 20, 2019



A TON of DIVERSE organizations city-wide wanted to participate, which we were delighted (and a little surprised) by!

Here are some of them (which ones would you expect?)

Participating Organizations

EcoTarium

museum of science and nature

technocopia
worchester



WPI



HUNCHBACK GRAPHICS
BRANDING & DESIGN



WORCESTER
HISTORICAL MUSEUM





ARTS
WORCESTER



WORCESTER CLEAN TECH INCUBATOR



THE **T.E.C. Schools**
THINK • EXPLORE • CREATE



They are all donating in-kind. *

Some highlights of the July 20th event include:

- Clark University will display rare Goddard artifacts, including the rocket launcher he used in 1926 at Aunt Effie's.
- Local arts organization working with high schoolers to create fashionable/innovative “space suits” to be displayed at locations around the city.
- Local futures league baseball team (go, Bravehearts!) is hosting a “Space Night”-themed game that evening. They're sponsoring a bike ride from downtown to the ball field
- Local coffee shop is playing archival space-themed footage all day.
- Several restaurants are serving space-themed cocktails– *Buzzed Aldrin* anyone?

* If you are seeking monetary donations, start seeking early!

Create a "star map" so folks know where to go...

Worcester On The Moon

Downtown

Worc Historical Museum
Worcester Pop Up
Technocopia
Arts Worcester
Craft Table & Bar
Beer Garden
Brew On The Grid
Stix
Revolution

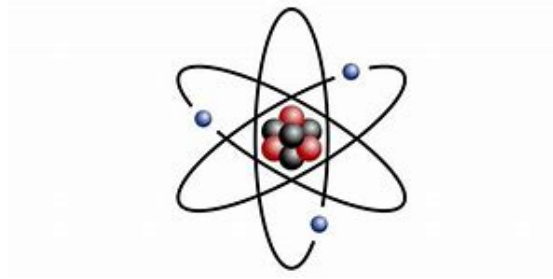
Historic Sites:

Goddard House
Goddard Grave
Skull Tomb WPI
Clark Univ.



Every vision is a joke until the first [wo]man accomplishes it... - Robert Goddard





NISE Network - NASA and the Creative Discovery Museum

Chattanooga, TN







Stomp Rockets





Impact Craters

A high-resolution photograph of the Moon's surface, showing a dense field of craters of various sizes and several dark lunar maria. The lighting creates strong shadows, highlighting the rugged terrain. The text "Open Space" is overlaid in the upper right corner.

Open Space

Story Time

BREAKFAST MOON

Written by Meg Gower
Illustrated by David Barker





nana

The Original Marshmallow Sandwich

Moon Pie
since 1917

The Original
Moon Pie
since 1917

Banana

Moon Pie

Moon Pie
Banana

DOUBLE DECKER

The Original Marshmallow Sandwich

Moon Pie
since 1917



12
Individually
Wrapped Pies

DOUBLE DECKER

nana

For more information please visit:

cdmfun.org

Discussion & Questions?

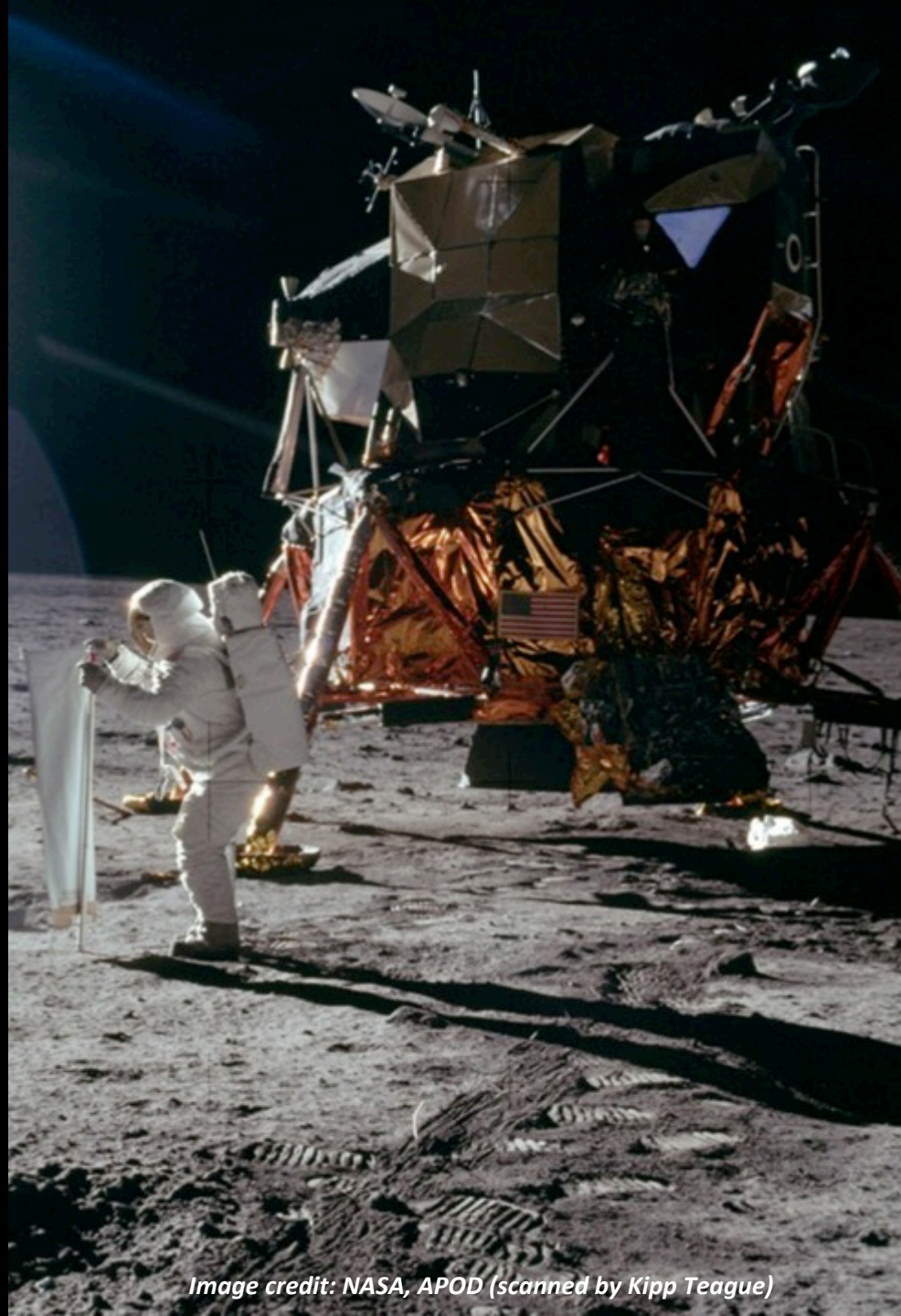


Image credit: NASA, APOD (scanned by Kipp Teague)

Our Next Workshop



Tuesday, June 4, 2019
2-3pm ET / 11am-12pm PT

Earth & Space Science for Early Learners

- **Dawn Baldwin**, Children's Museum of Science & Technology
- **Emily Belle**, Sciencenter
- **Anne Drake**, Great Lakes Children's Museum
- **Anna Hurst**, Astronomical Society of the Pacific
- **Katie Julsrud**, Children's Museum of Eau Claire
- **Stephanie Kadum**, Stepping Stones Museum for Children



EXPLORE SCIENCE Earth & Space

Applications Open Late Summer 2019!
Explore Science: Earth & Space 2020 toolkit applications
due November 1, 2019



<http://www.nisenet.org/earthspacekit-apply>

Get Involved

Learn more and access the
NISE Network's online digital resources
nisenet.org

Subscribe to the monthly newsletter
nisenet.org/newsletter



Follow NISE Net on social networking
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Thank You

