Conference Agenda

**Wednesday, Feb. 3, 2016**

3-6 p.m. Early bird check-in
5-7 p.m. Possible receptions (pre-service teachers network with attendees) *(Tentative)*

**Thursday, Feb. 4, 2016**

7:15 a.m. Check-in begins
7:15 a.m. Breakfast on Independence Plaza
7:45 a.m. SEEC 101 (A must for all new attendees to SEEC) in Blast-Off! Theater
8:30 a.m. Welcome address and keynote - TBA
10:15-11:30 a.m. First session (60 min)
11:30 a.m.-12:30 p.m. Lunch buffet in Astronaut Gallery
12:45-2:15 p.m. Second session (90 min)
2:45-4:15 p.m. Third session (90 min)
4:45 p.m. Dismiss (bus run begins) *See help desk for bus schedule*
5 p.m. Those staying for Epicurean will go to Blast-Off! Theater for pre-Epicurean entertainment
6:30-9:30 p.m. “A Taste of Space” Epicurean Event (bus will run hotel loops)

**Friday, Feb. 5, 2016**

7:15 a.m. Check-in
8-9 a.m. Keynote address by Jeff Goldstein
9-10 a.m. NASA and vendor booths
10 a.m.-11:30 a.m. First session (90 min)
11:30 a.m.-12:30 p.m. Lunch
12:45-2:15 p.m. Second session (90 min)
2:45-4:15 p.m. Third session (90 min)
4:45 p.m. Dismiss (bus run begins) *See help desk for bus schedule*
7:15-11:45 p.m. Banquet

**Saturday, Feb. 6, 2016**

7:30 a.m. Doors open
8:30-10 a.m. First session (90 min)
10:30 a.m.-Noon Second session (90 min)
Noon-1 p.m. Lunch
1 p.m.-2:30 p.m. Third session (90 min)
2:45-3:45 p.m. Keynote address – TBA
3:45-4 p.m. Door prizes and farewell
4 p.m. Dismiss, get certificates in Zero-G Diner
4:30 p.m. Conference Help Desk closes
7 p.m. Space Center Houston closes

*Please note that presenters, sessions and activities subject to change without notice.*
Session Selection

Selecting an individual breakout sessions is easy. Just read through this conference booklet to see the selections for each time slot. Then, use the “Organize Your Sessions” form to plan your conference. Please note that if the session reads “double session,” you should leave the session space following it empty. After filling out the planner, go online and make your session selections at [http://www.spacecenterprogs.org/seec/seecLogin.aspx](http://www.spacecenterprogs.org/seec/seecLogin.aspx)

Sessions that are full will not appear. It’s that easy! Breakout sessions include NASA tours as well as the hands-on sessions. **Just be sure to choose quickly as some sessions and tours fill up fast. (All tours require closed-toe shoes.)**

If a session is full, don’t worry. Check with the conference help table when you arrive to determine if there are openings, or watch the “swap” board for the session ticket.

If you have any questions, please contact us at SEEC@spacecenter.org.

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**Important! Please read carefully**

- Your visit to NASA Johnson Space Center is a special event. You will enter working facilities subject to strict safety and security policies. Please follow the direction of your host escort at all times.

- It is essential that all members of the group stay together and not venture from their NASA escort. Wandering into restricted areas constitutes a security violation and could result in the termination of your visit.

- Your visit will require walking and standing for extended periods and may involve climbing several flights of stairs. Guests should wear comfortable, flat, fully enclosed shoes (no high-heels, sandals, flip-flops, slides, mules, Crocs, etc.) during their visit. We also recommend that guests wear slacks (instead of shorts or skirts) as an additional safety precaution.

- Cameras are welcome in all facilities unless instructed otherwise. However, photography of individuals is discouraged without permission.

**Attention all non-U.S. citizens**

If you are not a U.S. citizen, you must fill out a NASA JSC Security Form in order to attend the NASA tours. Please go to the SEEC website for more information and to download the form. [http://spacecenter.org/education-programs/teacher-programs/teachers-seec/](http://spacecenter.org/education-programs/teacher-programs/teachers-seec/)

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Thursday, Feb. 4

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10:15-11:30 a.m.

After School Space Club: To the Moon, Mars and Beyond!
Margot Solberg, Academia Cotopaxi, Quito, Ecuador
Education Consultant for the Ecuadorian Civilian Space Agency
After School Space Club rocks! Ignite your students towards STEAM by engaging them in hands-on activities which ignite a passion for aerospace science. Activities can include the Canadian Tomatosphere project, creating landers, launching rockets, Mars exploration, applying Newton’s theories of motion, and much more. Attendees will leave with an understanding of how to engage young minds in aerospace exploration (with the added bonus of advancements made with the Ecuadorian Civilian Space Agency) ...to the Moon, Mars and beyond! Don’t miss out on an EXA door prize!
Grades: 3-5 Subjects: Science, Math, Technology

Art in Space
Sarah Niklas, Primrose, Willis, TX
Kimberley Joiner, Primrose, Spring, TX
Science and Art, everyone’s favorite subjects in school. In this session, we will focus on the “A” in STEAM as we add an artistic interpretation to learning fun facts about space science. This session will be hands-on with activities to experience and take back to your classroom. We will also show of some stellar bulletin board ideas.
Grades: K-2 Subjects: Science, Technology, Fine Arts

Engineering our way to Mars
Maria Chambers, NASA Ames Research Center, San Jose, CA
Sarah La Benz, NASA Ames Research Center, San Jose, CA
Have you ever wondered what it’s like to be a NASA Engineer? In this session, learn how to design and build an airbag system that will safely land a payload on Mars. Engage and explain force, potential, kinetic, and mechanical energy using Next Generation Science Standards and Common Core Math.
Grades: 3-8 Subjects: Sciences, Technology, Math, Fine Arts

A Field Trip to the Moon
Dorinda Risenhoover, NASA Oklahoma Space Grant Consortium, Hydro, OK
Brittany Board, Oklahoma Space Grant Consortium, Keeler, TX
Hop aboard and take a trip to the moon! Through this fast-paced hands-on session, you will learn how to transform your students into astronauts (complete with suits) and take them on a trip in a room transformed to resemble the moon while immersing them in hands-on STEM based experiments and activities.

Exploration Academy- ‘An Interdisciplinary Approach to Teaching Low-Performing Students’
Allice Walker, Space Center Houston, Houston, TX
This session will discuss SCH’s Exploration Academy which is designed to give unique experiences with real world application/problems, making science relevant, every day, and social... embedded in all of this is social emotional learning. Using current research in project-based learning and problem-based learning, students are involved in solving authentic problems, working with others, and building real solutions.
Grades: 6-8 Subjects: Science

Please note that presenters, sessions and activities subject to change without notice.
10:15-11:30 a.m. continued

**International Space Station**
Gary Kitmacher, NASA International Space Station Program, Houston, TX
This session is intended as a brief overview of the International Space Station highlighting its design, and operation and identifying existing/available classroom/educational resources. The presenter was one of the designers of the ISS in the 1980s and responsible for the integration of internationals throughout many years of the program.
**Grades: K-12**  **Subjects: Science, Technology, History**

**NASA IS With You When You Fly: Principles of Flight**
Barbie Buckner, NASA Armstrong Flight Research Center, CA  
Scott Wiley, NASA Armstrong Flight Research Center, CA
Come explore aeronautics, parts of an airplane, and four forces that allow aircraft to fly as you engage in hands-on, standards-aligned mathematics, science and engineering activities and multimedia. Make real world connections from current research at NASA Armstrong Flight Research Center.
**Grades: K-8**  **Subjects: Science, Technology, Language Arts, Math**

**K-4 Science with the GLOBE Program**
June Teisan, NOAA Office of Education, Washington, DC
Primary School students LOVE exploring Science! Educators LOVE resources that grab kids' interest through solid science and fun, enriching activities! Find out more about Elementary GLOBE, designed to introduce K-4 students to the study of Earth System Science. Complete instructional units are FREE online and include Science- based storybooks and classroom learning activities complementing the stories, all designed to introduce students to key concepts in water, soils, seasons, clouds, and more.
**Grades: K-5**  **Subjects: Science**

**Lunar Lessons: Clearing Student Moon Misconceptions through Hands-on Activities**
Meredith Swartzendruber, Everett Meredith Middle School, Middleton, DE  
Jennifer Cheesman, Zuni Hills Elementary, Phoenix, AZ
Students come to the classroom with many misconceptions about the moon. In this session, you will learn many hands-on activities that you can use to help clear up their understanding of all things lunar! This will be an active session in which you will be provided take-home lesson materials.
**Grades: 3-8**  **Subjects: Science**

**The Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST)**
Nation's highest honors for teachers of mathematics and science (including computer science). Awardees serve as models for their colleagues, inspiration to their communities, and leaders in the improvement of mathematics and science education.
**Grades: K-12**

**Pool- Bot!**
Jason Fontaine, San Jacinto College, Houston, TX  
Janis Fowler, Director- Aerospace Academy, Houston, TX
Discover the simplicity of teaching students the fundamentals of engineering and design through the pool-bot. Teach buoyancy and design through this simple approach to underwater robotics!
**Grades: 6-8**  **Subjects: Science, Technology**

**Space Loteria**
Alicia Baturoni Cortez, Johnson Space Center Office of Education, Houston, TX  
Carlos Fontanot, Johnson Space Center ISS Mission Ops & Integration, Houston, TX
NASA Johnson’s Space Center Hispanic Employee Resource group has developed a bilingual education outreach tool that can be used to teach space science vocabulary and concepts in a culturally relevant way. The bingo-like game is familiar to and beloved by many Latinos and is a great resource for ELL, ESL and Spanish language TWI programs. Come play the game and learn how to acquire a set for your classroom.
**Grades: K-12**  **Subjects: Science, Technology, Language Arts**

Please note that presenters, sessions and activities subject to change without notice.
10:15-11:30 a.m. continued

Tours

**Space Vehicle Mock-up Facility (SVMF)**
Explore the training grounds for the astronauts. See full size mock-ups of the Space Station and Orion.

**Neutral Buoyancy Lab— Observation Deck**
Take a trip to the pool where astronauts practice for their spacewalks—the NBL. This facility is the underwater training facility for the astronauts and your chance to see state-of-the-art training—the next best thing to space! *This tour has limited availability and the participants will be taken on the floor area of the pool.*

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Take a trip to the pool where astronauts practice for their spacewalks—the NBL. View the facility from above the pool area where you will get a good scope of the size. This facility is the underwater training facility for the astronauts and your chance to see state-of-the-art training—the next best thing to space!

12:45-2:15 p.m.

**3-2-1 Rockets**
Stacy Welch, NASA Education Specialist-SEA Team, Houston, TX
Everyone loves rockets! Rocket science integrates science and math together for an out-of-this-world lesson! Learn how to incorporate rockets into your classroom or club from NASA Education Specialists. From the math and science behind rockets to streamlining launch day, let’s design the right rocket lesson for your classroom.

*Grades: 9-12   Subjects: Science, Math*

**3D Printing—** Double session
Jenn Martinez, Houston ISD, Houston, TX
Omar Valdivia, Houston ISD, Houston, TX
Do you want to live on Mars? Be a part of the first Mars community. Help design and build it from the ground up. Want a refreshing idea on incorporating space science into your classroom? Learn how to use a STEM interdisciplinary approach, which will include problem based learning, 3D printing, and Next Generation Standards.

*Grades: 3-8   Subjects: Science, Technology, Fine Arts, Social Studies*

**Aerospace Connections in Education program— Be an ACE teacher**
Susan Mallett, Civil Air Patrol, Montgomery, AL
Ginny Smith, Civil Air Patrol, Montgomery, AL
K-6 educators learn how to incorporate the interdisciplinary free Civil Air Patrol’s ACE program in YOUR school! Free materials and detailed guidance given. Door prizes and lots of great opportunities for free STEM Kits for you to keep!
Aerospace DOES connect education!

*Grades: K-8   Subjects: All subjects*

**Come Fly with Us to the Edge of Space @ Beyond**
Sharon Eggleston, Maine Space Grant Consortium, Brunswick, ME
Diane Bowen, Maine Space Grant Consortium, Brunswick, ME
Come join us and travel to the edge of space & beyond to see what harsh conditions can support life. Learn how to engage your students in authentic scientific research experiences. This session will challenge students to look beyond Earth’s boundaries to seek answers to questions ‘What is life? Does life exist elsewhere in our universe?’

*Grades: 6-12   Subjects: Science, Technology, Math, Engineering*

**An Eagle’s Eye View of the Earth from Above**
Dorinda Riesenhoover, NASA Oklahoma Space Grant Consortium, Hydro, OK
Lauren Robinson, NASA Oklahoma Space Grant Consortium, Weatherford, OK
Soar above the Earth and view our world from a distance through this hands-on STEM-based remote sensing workshop! Activities will include creating 3-D topo maps, viewing the Earth using aerial and satellite imagery, and treasure hunting with a GPS. All participants will receive aerial and satellite images for their classroom! One lucky participant will win a GPS for classroom use!

*Grades: 3-8   Subjects: Science, Technology, Social Studies*

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12:45-2:15 p.m. continued

DLN Presents: Speed dating NASA’s Center
Michael Hare, Paragon-TEC NASA JSC, Houston, TX
Crystal Del Rosso, Paragon-TEC NASA JSC, Houston, TX
NASA’s Digital Learning Network (DLN) connects your students to NASA engineers, scientists and education specialists across the United States, utilizing web-based and standards based video-conferencing technologies. Session participants will learn about NASA DLN and experience first-hand how this free resource can be integrated into curriculum. During the session, participants will connect to 3 to 5 different NASA centers to interact with experts and participate in a DLN classroom module.

Grades: K-12  Subjects: Science, Math, Technology, Fine Arts, Social Studies, History

ISS Construction Simulation (Dive Session)
Double session
Craig Shannon, NBL Dive Master
Train like astronauts in this exciting session! You will participate in underwater training exercises using SCUBA gear in a local indoor pool. No previous experience necessary.

Bringing a swimsuit and towel. (T-shirts not required but helpful)
Additional $35 charge for this session. NOTE: This is a double session! If registering for this session pay online first This session is not available to select online. We will add you to it once you have paid online. Leave the time slot open on your session selection

Grades K-12

A little Bit of Space
Michael Wilkinson, Fieldston Lower School Math-Science, Bronx, NY
Erin Mulcahy, littleBits, New York City, NY
The littleBits Space kit supports the exploration of Earth and Space science and the electromagnetic spectrum. Join us in this workshop to experience the play, exploration and making that make STEAM fun. Activities include Energy Sensing, Orbits, Wave Propagation and Behaviors, Stars, Long Distance Communications and Planetary Exploration and Rover Races.

Grades: 3-12  Subjects: Science, Technology, Language Arts, Math, PE, Fine Arts, Social Studies, History

Money - Money - Money - Grant Writing for Your Classroom and You! Double session
Barb Gosney, Cambridge Academy- Queen Creek, Mesa, AZ
Teachers are often willing to go to workshops, trips, and camps in order to get classroom materials and professional development, but how does one afford it? The presenter will take you through the process writing grants and help you find the multitude of grant offerings, websites, and grant writing assistance. (PLEASE BRING A LAPTOP FOR GRANT WRITING.)

Grades: K-12  Subjects: All subjects

The Principle of Optical Inter-Satellite Communication and Propellers
Tomohiko Aikawa, Itoman Takamine JHS, Nanjou, Japan
Satomi Fukai, Etajima Noumi JHS, Hiroshima, Japan
Two teachers from Japan will demonstrate the principle of Optical Inter-Satellite Communication with LED and the lift force with Plastic Dragonfly.

Grades: K-12  Subject: Science

Engineering a Robot to do the Job
Maria Chambers, NASA Ames Research Center, San Jose, CA
Sarah La Benz, NASA Ames Research Center, San Jose, CA
Let’s design and build a robot to help with a task, just like Robonaut! In this session, engineer a bristle bot to move payloads from one location to another. Go through the steps of the Engineering Design Process to determine the best method to move the payload.

Grades: 3-5  Subjects: Science, Technology, Math

Folding Your Way to Success
Stacey Karpowicz-Boring, Clear Creek ISD, League City, TX
Amanda Rodriguez, Dickinson ISD, League City, TX
Learn new ways to engage your students using Hands-on Foldables in the style of Dinah Zike. We will give you specific foldables to use in Geometry and Algebra 2. These foldables could be utilized for both note-taking and project assessment. FUN! Hands-on! Come and learn with us. Door Prizes!

Grades: 6-12  Subjects: Science, Technology, Math

It’s a Frickin’ LASER
David Temple, Longview High School, Longview, TX
Alan George, Longview High School, Longview, TX
This will be an interactive workshop on lasers. Some brief background on the development of lasers, some of their uses in astronomy. Most of the workshop will be small group activities with lasers that will demonstrate optics content that can be done in most any classroom.

Grades: 9-12  Subjects: Science
12:45-2:15 p.m. continued

The New STEM: Success through Engineering Missteps
Amanda Ewenson, Northside ISD, San Antonio, TX
Finding clever solutions to simple problems helps students stretch their thinking and demonstrate creativity. It also helps them to get interested in STEM careers where this type of thinking is essential. Come join us to build a Cardboard Arcade game and a Rube Goldberg machine. Use your creativity and STEM knowledge to design both projects and be successful through failure


Relive your Childhood- Paper airplanes meets Technology– Double session
William Luke, Central Texas College, Copperas Cove, TX
Gregory Luke, Temple High School, Temple, TX
Constructing two paper airplanes (Civil Air Patrol and Space Shuttle) Educators will determine the area of the wings, estimate the distance and time aloft their planes will achieve. Educators will then fly their planes, recording distance and time aloft. Educators will then show how using Ti inSpire navigator system they can evaluate their data to include graphs (time aloft vs wing area and distance vs time aloft). They will also be shown how the system is used in classroom setting and how it makes learning come alive.

Grades: 6-12 Subjects: Science, Math, Technology

Sing Along with STEAM: Earth, Air, and Space
Adrienne Provenzano, Independent STEAM Educator, Indianapolis, IN
Group sing-alongs are a fun way to learn! We'll sing about traveling in space, types of energy, rocks and minerals, the spectrum of light, and solar systems! Learn how to use songs in your lesson plans to engage students. Singing can introduce vocabulary, spark curiosity, and teach STEM concepts.

Grades: K-12  Subjects: All subjects

Space Food and Nutrition: A STEM Feast
Steve Culivan, NASA STEM Educator Professional Development Collaborative, Stennis Space Center, MS
Explore NASA STEM curriculum investigating space food and the nutritional needs of astronauts to design sample space food menus that develop a better understanding of space food and nutrition for human space exploration. Explore a menu of inquiry activities and resources to satisfy your STEM appetite.

Grades: 3-8  Subjects: Sciences, Math

Take a Flight - out of the Classroom– Double session
Susan Mallett, Civil Air Patrol, Montgomery, AL
Debbie Dahl, Civil Air Patrol, Montgomery, AL
Out of the Classroom; Into the Sky! Civil Air Patrol’s Teacher Orientation Program (TOP) Flight!
K-12 teachers join “ground school” and free flight over Houston! This DOUBLE SESSION will include tour, activities and free materials/STEM Kits shipped to you. Cameras encouraged!!! U.S. citizenship needed. Cost: $17.50. Find out how to pre-pay and get an ID# needed for flight by contacting ae@capnhq.gov.

Grades: K-8  Subjects: All but Fine Arts

Tours

Food Lab
Yummy...Astronaut Food! Have you ever wondered how space food is prepared and packaged? Visit the food laboratory at Johnson Space Center and see first hand. Learn how nutritionists, dieticians, and engineers prepare food for flight.

Mission Control
Once the manned spacecrafts have launched, Houston’s Mission Control takes over. Visit this secure location and see the rooms where history happened. You will see the former Mission control room for the shuttle which now houses the ISS Control room.

Orion Parachute Facility
Orion parachute hardware is displayed in a hands-on exhibit in B29. Various parachute designs, mortars, and other related hardware can be handled, including one of the main parachutes used during and recovered from the Exploration Flight Test 1 (EFT-1).
#YearinSpace: Investigate Bone Loss with Bone Simulant & Algebra
Brandon Hargis, NASA Johnson Space Center EPD Education Specialist, Houston, TX
One specific area of concern for researchers of human health in space is bone density, which is a measure of how strong the bone is. Bone density is measured by the amount of mineral in a skeletal area, and this measurement is called Bone Mineral Density (BMD). Students will use algebraic concepts in this activity to explore how bone density changes while in space.

**Grades: 3-5**  **Subjects: Science, Math**

Apollo 13 Emergency Engineering Simulation
Laurie Burell, Wilson K-8, Amphitheater SD, Tucson, AZ
Devon Busby, Wilson K-8, Amphitheater SD, Tucson, AZ
Explosion on Odyssey Command Module has left Apollo 13 crew with a damaged space craft. To conserve energy, the Odyssey has been shut down and astronauts must move into the cramped LEM while CO2 levels are increasing to a dangerous level. Houston engineers must design a way to convert the LEM CO2 filters to fit into Odyssey’s cylindrical filters. Teachers will simulate astronauts and engineers’ challenge to save the astronauts.

**Grades: 3-12**  **Subjects: Science, Technology, Technology, Math, PE, History**

Blast off with the NASA BEST Engineering Design Challenge
Susan Kohler, NASA Glenn Research Center, Cleveland, OH
Teaching force and motion has never been so much fun. NASA’s BEST Next Generation engineering Design Challenge will take propulsion to a new level. We will complete the Green Propellant Infusion Mission Challenge by designing and building a simple spacecraft and “green” spacecraft propellant.

**Grades: 6-12**  **Subjects: Science, Technology, Math**

Climate Classification and Climate Change
Lynne Hehr, University of Arkansas/Arkansas NASA ERC, Fayetteville, AR
John Hehr, University of Arkansas Geoscience Department, Fayetteville, AR
One of the Earth’s most important global connectors is climate. Join this session to explore the Koppen Climatic Classification from plant distribution/ecotone boundaries to temperature/precipitation categories that define climatic regions. Learn how to classify your region and compare to other regions around the world. Ideas/methods for simple data collection provided.

**Grades: 3-12**  **Subjects: Science, Math, Social Studies**

DLN Presents: In Sight Rover to Mars: A NASA Discovery Mission
Michael Hare, Paragon-TEC NASA Johnson Space Center, Houston, TX
Crystal Del Rosso, Paragon-TEC NASA Johnson Space Center, Houston, TX
Enhance your lessons with FREE live connections to NASA’s Digital Learning Network (DLN). Give your students the amazing opportunity to speak LIVE with NASA engineers, scientists and education specialists! Session participants will travel onsite to the Johnson Space Center DLN studios to connect live with a NASA Education specialist at Goddard Space Flight Center and learn how students in grades 4-12 can participate the DLN in a brand new lesson, Insight: a NASA Discovery Mission.

**Grades: 3-12**  **Subjects: Sciences, Math, Technology, Fine Arts, Social Studies, History**

Engineering Adventure
Benjamin Glover, Houston ISD, Houston, TX
Kiamesha Bagley, Houston ISD, Houston, TX
Looking for a way to engage your students in Project Based Learning and introduce them to the Engineering Design Loop? Then look no further! Come have fun while designing balloon powered race cars out of different materials, and race them to test the fastest design! Are you up to the challenge?

**Grades: 3-5**  **Subjects: Science, Technology, Math**

Moon Madness!
Leesa Hubbard, Wilson County Schools, Lebanon, TN
Dan Hubbard, Wilson County Schools, Lebanon, TN
Become an officially certified lunatic! You are guaranteed to leave this session with something new! Activities will include the use of models and maps, and cover everything from math to social studies. Your students will be able to explore and interpret lunar data with the resources provided. Don’t miss out!

**Grades: 3-8**  **Subjects: Science, Technology, Math, Social Studies, History**

To Infinity and Beyond
Brian Krauklis, Katy ISD, Katy, TX
Stacy Levin, Katy ISD, Katy, TX
Become a rocket scientist (literally) and have a blast as we build and launch Estes model rockets. Learn how to use model rocketry as a way to teach Newton’s 3 Laws of Motion and demonstrate how NASA gets astronauts and their equipment into orbit. Model rockets are provided (that you get to keep) along with the fun!

**Grades: 3-12**  **Subjects: Science**

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Off the Earth, For the Earth...and in the Classroom!
Becky Kamas, NASA - Johnson Space Center, Houston, TX
Kelly McCormick, NASA - Johnson Space Center, Houston, TX
Join NASA Education and bring the International Space Station and the One Year Mission alive for your students. Explore the space station and its mission, participate in STEM activities, investigate a new website, and discover an exciting challenge and more during this workshop. And...OUT OF THIS WORLD door prizes!
Grades: 3-8   Subjects: Science, Technology, Math

Paint like a professional: Spray Paint Solar System Murals
Dorinda Risenhoover, NASA Oklahoma Space Grant Consortium, Hydro, OK
Diane Keeton, Washington Elementary, Clinton, OK
Amaze and impress your students by "spray painting the solar system"! During this session, you will learn how to spray paint the solar system onto poster boards using a technique that looks professional and will rival the works of the street painters. This activity can be adapted for any grade level.
Grades: K-12   Subjects: Science, Fine Arts

Rolling Into Robotics: Playing and Programming With Sphero
Kaci Heins, Northland Preparatory Academy, Flagstaff, AZ
Jeff Herold, Hillcrest Middle School, Glendale, AZ
Wanting to get into robotics, but need a robot that is fun, cheap, and easy to use? Then come and check out the App controlled robot called Sphero! Learn the basics of driving and programming to accomplish tasks for prizes! Download SPRK and MicroLab on your device before the session.
Grades: K-12   Subjects: Science, Technology, Math

The Sky Tonight
Jennifer Becerra, Challenger Center San Antonio College, San Antonio, TX
Celina Terrones, Challenger Center San Antonio College, San Antonio, TX
Explore the night sky as we integrate science, literature and writing skills into the study of the constellations. Enrich your earth and space science curriculum by investigating stories in the sky, constellations, and learning how to create your own constellation in an inflatable planetarium. Join us under the STARS!
Grades: 3-8   Subjects: Science, Language Arts, Social Studies, History, Fine Arts

Space Night
Mare Gilmore, STEAM Powered Learning, LLC, Miramar Beach, FL
Janice Katz, Davenport School for the Arts, Lakeland, FL
This session will go through all the steps to coordinate, facilitate and manage a Space Night for your school that will involve students, staff, administration and community. The participants will go through the steps needed to get permission from administration, letters to be written to local businesses (for donations and support), securing special guest speakers, scheduling and how to thank all the people that helped you put on the best Space Night ever! Space Night can even be used to raise money for a charity and/or raise money for the school. Also, there will be ideas to raise money, throughout the school year, to help sponsor your Space Night.
Grades: K-8   Subjects: Science, Math

Tours
NanoRacks LLC, Houston Facility Tour (NEW)
Want to send your students’ projects into space? NanoRacks has created low-cost opportunities for students to send their experiments to the U.S. National Lab within the International Space Station. Teachers will learn about the three main types of STEM opportunities offered to students by NanoRacks, a company devoted to allowing new users, from students to researchers, to conduct research, design experiments, tinker, make mistakes, and maybe realize wonderful breakthroughs in low-earth orbit and beyond.

Neutral Buoyancy Lab— Observation Deck
Take a trip to the pool where astronauts practice for their spacewalks—the NBL. This facility is the underwater training facility for the astronauts and your chance to see state-of-the-art training—the next best thing to space! This tour has limited availability and the participants will be taken on the floor area of the pool.

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Space Vehicle Mock-up Facility (SVMF)
Explore the training grounds for the astronauts. See full size mock-ups of the Space Station and Orion.

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Session Selection Form — Thursday

10:15-11:30 a.m.

- All session this time period are 60 min.
- After School Space Club: To the Moon, Mars and Beyond!
- Art in Space
- Engineer Their Career
- A Field Trip to the Moon
- Engineering Our Way to Mars
- International Space Station
- K-4 Science with the GLOBE Program
- Lunar Lessons: Clearing Student Moon Misconceptions through Hands-on Activities
- Math Instruction in High Definition with NASA Resources
- The Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST)
- Pool-Bot!
- Space Loteria

TOURS
- Space Vehicle Mock-up Facility (SVMF)
- Neutral Buoyancy Lab — Observation Deck
- Neutral Buoyancy Lab — Visitors Gallery

12:45-2:15 p.m.

- 3-2-1 Rockets
- 3D Printing — Double session
- Aerospace Connections in Education program — Ba and ACE teacher
- An Eagle’s Eye View of the Earth from Above
- Come Fly with Us to the Edge of Space @ Beyond
- DLN Presents: Speed dating NASA’S Center
- Engineering a Robot to do the Job
- Folding Your Way to Success
- ISS Construction Simulation (Dive Session) — Double session
- It’s a Frickin’ LASER
- A Little Bit of Space
- Money - Money - Money - Grant Writing for Your Classroom and You! — Double session
- The New STEM: Success through Engineering Missteps
- The Principle of Optical Inter-Satellite Communication and Propellers
- Relive your Childhood — Paper airplanes meets Technology — Double session
- Sing Along with STEAM: Earth, Air and Space
- Space Food and Nutrition: A STEM Feast
- Take a Flight — Out of the Classroom — Double session

2:45-4:15 p.m.

- #YearinSpace: Investigate Bone Loss with Bone Simulant & Algebra
- 3D Printing — Double session continued
- Apollo 13 Emergency Engineering Simulation
- Blast off with the NASA BEST Engineering Design Challenge
- Climate Classification and climate change
- DLN Presents: In Sight Rover to Mars: A NASA Discovery Mission
- Engineering Adventure
- ISS Construction Simulation (Dive Session) — Double session continued
- Money - Money - Money - Grant Writing for Your Classroom and You! — Double session continued
- Moon Madness!
- Off the Earth, For the Earth…and in the Classroom!
- Paint like a professional: Spray Paint Solar System Murals
- Relive your Childhood — Paper airplanes meets Technology — Double session continued
- Rolling Into Robotics: Playing and Programming With Sphero
- Take a Flight - out of the Classroom — Double session continued
- The Sky Tonight
- Space Night
- To Infinity and Beyond

TOURS
- Nanoracks
- Neutral Buoyancy Lab — Observation Deck
- Neutral Buoyancy Lab — Visitor Gallery
- Space Vehicle Mock-up Facility (SVMF)

Please note that presenters, sessions and activities subject to change without notice.