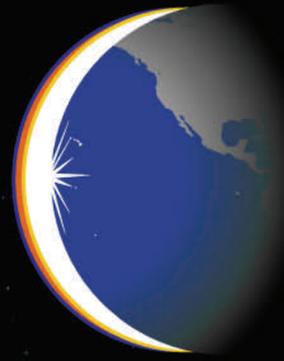


see



SPACE CENTER
HOUSTON

17th Annual

February 3-5, 2011

Space Exploration Educators Conference

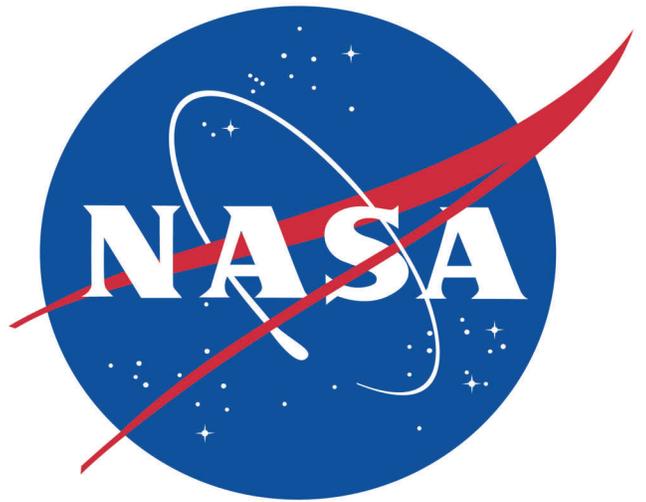
**ROVING
INTO THE NEXT
GENERATION**



Special Thanks



www.SteveSpanglerScience.com



Albert and Ethel
Herzstein
Charitable
Foundation



Citizens Serving Communities
Above and Beyond

Space Exploration Educators Conference

Conference Highlights

No up or down, no floors or ceilings, so every side is right side up...space is a different and exciting place! Come experience space at the 17th Annual Space Exploration Educators Conference. You will go home recharged and ready to ignite the minds of your students!

- ☆ Network with the top scientists, engineers and educators from the United States, Canada, Japan and the United Kingdom.
- ☆ Hear Keynotes by Mike Brown , author of “ How I Killed Pluto and Why It Had It Coming” on Thursday , Astronaut Robert Thirsk on Friday and wrapping up the conference on Saturday will be Steve Spangler, creator of amazing science gadgets and gizmos.
- ☆ Collect exciting materials to inspire your students and enhance your classroom.
- ☆ Hear from astronauts and engineers currently working on space exploration.
- ☆ Earn up to 24 Professional Development hours.
- ☆ Attend the “Taste of Space” Epicurean Evening on Thursday night.
- ☆ Dance the night away at our Friday night banquet.
- ☆ Enjoy the banquet on Friday night, where you will be served a delicious dinner and drinks then party the night away with MAX-Q all astronaut band. (Band subject to change based on NASA launch schedules)

Registration Information

There are several methods for registering!

You can register and pay online with a credit card at: <http://spacecenter.org/TeachersSEEC.html>. If you plan to register with a check or a purchase order, please fax or mail in your registration form

If you have any questions , please call 281-283-7773 or email: SEEC@spacecenter.org

Presenters	October 1-February 2, 2011	\$100
NASA Presenters	October 1-February 2, 2011	Free
Early Bird Registration	October 1 – October 31, 2010	\$279
Registration	November 1–January 10, 2011	\$299
Late Registration	January 11- February 2, 2011	\$319

Cancellations

Due to the popularity of SEEC, cancellations and no-shows will be charged the full registration fee. No refunds will be granted. However, registration may be transferred to a colleague.

Schedule Of Events

Wednesday, February 2, 2011

4:00pm-6:00pm Early Bird Check-in

Thursday, February 3, 2011

7:00am Check-in Begins

7:30am SEEC 101 (recommended for all new attendees to SEEC)

8:00 am Welcome Address and Key Note Mike Brown

10:00am-11:30am First Session

11:30am-12:30pm Lunch

Mike Brown book signing at Spacetraders

12:45pm-2:15pm Second Session

2:45pm-4:15pm Third Session

4:45 pm Dismiss (Bus Run Begins)

5:30 pm All those staying for Epicurean will watch "Weightless Flights of Discovery" In Northrop Grumman Theater.

6:30pm-9:30pm "A Taste of Space" Epicurean Event (Bus will run hotel loops)

Sessions will take place at Space Center Houston, JSC Gilruth and other JSC areas *8 hours CEP Credit

Friday, February 4, 2011

7:15am Check-in

8:00am-9:15am Key Note -Astronaut , Robert Thirsk

10:00am-11:30am First Session

11:30am-12:30pm Lunch

12:45pm-2:15pm Second Session

2:45pm-4:15pm Third Session

4:45pm Dismiss (Bus Run Begins)

7:15pm-11:45pm Banquet

Sessions will take place at Space Center Houston, JSC Gilruth and other JSC areas *8 hours CEP Credit

Saturday, February 5, 2011

7:15am Doors open

8:00am-9:30am First Session

10:00am-11:30am Second Session

11:30am-12:30pm Lunch

12:45pm-2:15pm Third Session

2:30pm-3:30pm Key note - Steve Spangler

3:30pm-3:45pm door prizes/ Farewell

3:45 pm Dismiss/Certificates in O-G Dinner

4:00-5:00pm Steve Spangler book signing at Spacetraders

4:45pm Conference Help Desk Closes

7:00pm Space Center Houston Closes

Sessions will take place at Space Center Houston and JSC Gilruth *8 Hours CEP Credit

Space Exploration Educators Conference Hotels

SEEC buses will provide transportation to and from the hotels listed below. Space Center Houston is not responsible for making attendees' hotel arrangements. Bus schedules will be posted online by January 2011 and in the hotel lobbies during conference.

Microtel Inn & Suites
1620 NASA Parkway
Houston, Texas 77058
Perezdes1@wynhg.com
\$49.95-\$64.95
Continental Breakfast

Econo Lodge
904 East NASA Parkway
Houston, Texas 77058
Gm.tx326@choicehotels.com
\$55-\$60
Continental Breakfast

Super 8 NASA
18103 Kings Road
Houston, Texas 77058
gm@super8nasa.com
\$62.61-\$67.39
Hot Breakfast

Days Inn & Suites NASA
750 W. NASA Parkway
Webster, Texas 77598
daysinn.com/hotel/15443
\$63-\$99
Continental Breakfast

Extended Stay America
1410 NASA Road 1
Houston, Texas 77058
jsc@extendedstay.com
\$69.99-\$89.99
No Breakfast

Extended Stays Deluxe
720 W. Bay Area Blvd.
Webster, Texas 77598
extendedstayhotels.com
\$64.99-\$79.99
Coffee Bar

LaQuinta Inn & Suites
520 W. Bay Area Blvd.
Webster, Texas 77598
Lq0780gm@laquinta.com
\$85
Hot Breakfast

Hampton Inn NASA
3000 NASA Parkway
Seabrook, Texas 77586
Vianey.ortega@hilton.com
\$89
Hot Breakfast

Hampton Inn & Suites
506 W. Bay Area Blvd.
Webster, Texas 77598
Vicki.jackson@hilton.com
\$89-\$109
Hot Breakfast

Staybridge Suites
501 Texas Ave.
Webster, Texas 77598
Kim_i@comcast.net
\$109-\$119
Hot Breakfast

Comfort Suites
16931 N. Texas Ave.
Webster, Texas 77598
gm.tx942@choicehotels.com
Call for pricing
Hot Breakfast

LaQuinta
3636 NASA Parkway
Seabrook, Texas 77586
Lqo618gm@laquinta.com
\$85
Continental Breakfast

Hilton Garden Inn
750 W. Texas Ave.
Webster, Texas 77598
Vicki.jackson@hilton.com
\$89-\$99
Cooked to order breakfast inclusive in room price

Hilton NASA Clear Lake
3000 NASA Parkway
Houston, Texas 77058
maylisyvachette@remingtonhotels.com
\$118
Full Service Restaurant/Lounge

Quality Inn
2720 NASA Parkway
Seabrook, Texas 77586
gm.tx29@choicehotels.com
\$119-\$124
Full Breakfast

Comfort Inn & Suites
2901 NASA Parkway
Seabrook, Texas 77586
Debby.comfortinnnasa1@yahoo.com
\$89.99
Full Breakfast

Not currently on Bus route

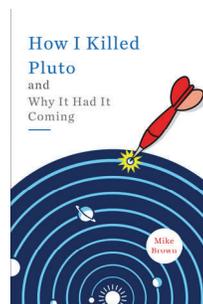
Marriott Springhill Suites
1101 Magnolia Ave.
Webster, Texas 77598
c.wain@concordhotels.com
\$99
Hot Breakfast Buffet included

Conference Keynotes



Mike Brown

Keynote - Thursday, February 3, 2011 - 8:00 am - 9:15 am
How I Killed Pluto and Why It Had It Coming



The demotion of Pluto from a planet to a mere dwarf planet was one of the most closely watched and controversial astronomical events of the last decade. Yet, 5 years later, most people still have a very cursory understanding of what really happened, and, more importantly, why it happened. I will talk about the history of the discovery of Pluto and the subsequent discoveries which led to its demotion. Along the way I'll discuss the importance of classification to science, the most common misconceptions about the solar system, and how best to use the Pluto controversy and demotion to explore the way science works.



Robert Thirsk (P.ENG.,MDCM,MBA)– Astronaut, Canadian Space Agency

Keynote - Friday, February 4, 2011 - 8:00 am - 9:15 am

Robert Thirsk has logged over 202 days in space on two different Space Missions. Thirsk was a payload specialist aboard STS-78 in 1996 and was a member of Expeditions 20/21 in 2009. He was the first Canadian to take part in a long duration mission. He works with educational specialists in Canada to develop space-related curriculum for grade school students. During SEEC he will share information about his spaceflight experiences and will also answer questions from the attendees.



Steve Spangler

Keynote - February 5, 2011 - 2:30pm - 3:15pm

Exploding Soda and Flying Potatoes: The Secret to Creating Unforgettable Learning Experiences



www.SteveSpanglerScience.com

It's true... not all teachers are created equal. There are good teachers and then there are truly **great** teachers. Understanding the differences in teaching styles is the key to learning how to turn ordinary moments into unforgettable learning experiences – the kind that kids talk about at the dinner table and remember for a lifetime. The secret to becoming the best teacher possible is to learn how to engage students on a whole new level using creative methods that promote wonder and exploration. Steve Spangler combines his experience as a science teacher and an award-winning toy designer to create educational experiences that make learning fun... and spread like a virus. Guaranteed fun... just watch out for the flying potatoes!

Important Conference Points

Conference Products

The banquet is included for registered attendees, however, if you would like to bring a guest you will need to purchase an additional ticket. The tickets are available for \$40 for the banquet. These tickets are on sale via the internet, registration form, or during the conference. Tickets will not be sold during the events.

Space Center Houston will also have curriculum products and conference apparel available during the conference. Order forms will be available on the website one month prior to the conference. Be sure to check back to order your shirt!

Door Prizes & Certificates

Door Prizes

Following the last session on Saturday, please proceed to the Northrop Grumman Theater for closing Keynote and door prizes! You must be present to win.

Certificates

Professional Development certificates will be available immediately following the door prizes. However, we would like to hear from you first. Simply fill out the evaluation form found in your conference packet, then head to the Zero-G Diner to exchange the evaluation for your certificate. If you need to leave the conference early, please come to the Help Table to receive your certificate no later than 12:30. After 12:30 go to the certificate table by Astronaut Gallery.

Educator Resource Center Materials

In order to receive materials from the Johnson Space Center Educator Resource Center (ERC), stop by the Educator Resource booth under the Shuttle.

Travel Notes

Space Center Houston is located between downtown Houston and Galveston. Take I-45 and exit NASA Parkway. The center is approximately three miles east of I-45. If flying, try to use Hobby Airport. A listing of conference hotels is provided on page 5.

When making your reservation, mention that you are a participant of SEEC at Space Center Houston. Many hotels offer discounts. If you are in need of shuttle services from the airport, please make inquiries at your hotel.

Space Center Houston is usually cool, so bring a sweater. We also recommend comfortable attire because you will be actively participating in breakout sessions. The reception, "A Taste of Space" is casual attire. The Friday night banquet attire is semi-formal. However, if you feel like really dressing up you won't be alone!

New to SEEC ?

If this is your first SEEC conference, there is an introductory session just for you! Veteran SEEC attendees will go over everything you need to know about the session cards, locations, food, tours, etc. So arrive early on Thursday for a little SEEC 101!

When: Thursday, February 3rd , 7:30-8:00 AM

Where: Blast Off Theater

Presented by: Brian Ewenson and Brian Jackson

Vendors

Interested in becoming a vendor at SEEC 2011? Please e-mail SEEC@spacecenter.org for more information regarding pricing and opportunities. You can also download our vendor form at <http://www.spacecenter.org/TeachersSEEC.html>

Important Conference Points

Selecting Your Sessions

Selecting your 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 on pages 33 & 34 to organize your sessions. Finally, go online and make your session selections at www.spacecenter.org/TeachersSEEC.html. Sessions that are full will not appear. It’s that easy! **Just be sure to move quickly as some sessions fill up fast.** Breakout sessions include NASA tours as well as the hands-on sessions. Tours fill up especially fast, so please plan accordingly.

If a session is full, don’t worry. Check with the Conference Help Table when you arrive to see if there are openings or watch the “swap” board for the session ticket.

If you have any questions, please contact us at (281) 283-2149 or by e-mail at SEEC@spacecenter.org.

Conference Dining and Social Events

New this year! In order to accommodate the variety of dietary needs of our attendees for lunches during the conference we are expanding our menu. This year all of the great food options in Space Center Houston’s O-G Diner will be available to you. Each attendee will receive \$15 worth of ‘space bucks’ to be used at any of our food stations each day. Food options are:

- Blast-off Bistro- Soups, Salad, and Sandwiches
- Martian Border- Mexican Fare
- Moon Wok- Asian and Stir-Fry
- Launch Food- Traditional American
- Italian Bistro- Pizza and Pasta
- Starbucks- For the coffee lovers
- Space Port Snacks

Your space bucks can be used at any one or more of these locations each day.

Conference Dining and Social Events

Additional Note

Since many of our conference hotels offer breakfast, Space Center Houston will not be serving breakfast any morning of the conference. Starbucks will be open and space bucks can be used.

“Taste of Space” Epicurean Evening

Thursday, February 3, 2011

6:30pm-9:30pm at Space Center Houston

Back by popular demand – “Taste of Space” Epicurean Evening! The event will take place at Space Center Houston from 6:30 to 9:30 p.m. in place of the usual conference reception. A special meet and greet area will be reserved for SEEC attendees only. Attendance is optional with a \$20 fee.

This event is a cultural experience showcasing the Clear Lake Area’s finest restaurants, food and beverages. All of your food and alcoholic/nonalcoholic beverages are included in the fee.

The reception, “A Taste of Space” is a casual attire event. Bus transportation will be provided to and from conference hotels beginning at 6:30pm and ending at 9:30pm.

17th Annual SEEC Banquet

Friday, February 4, 2011 7:15pm-11:45pm

at Space Center Houston

The capstone for the conference is the infamous SEEC banquet, where teachers are treated to a fabulous meal prepared by our award winning in-house caterer and 2 drink tickets. (beer and wine only) All additional beer and wine will be \$5.00 each. The banquet attire is semi-formal to business attire. Join us this year as we celebrate old and new friends, a rich history of space exploration and your role in educating the space explorers of tomorrow.

There is no need to purchase a ticket for the event if you are registered as a conference presenter or attendee. If you would like to purchase an additional ticket for a guest, the cost is \$40. No children permitted at banquet.

SESSION SELECTION

Special and Reoccurring Sessions

LUNAR SAMPLE DISC CERTIFICATION

Mike McGlone, NASA Johnson Space Center- Aerospace Education Services Project and Jackie Allen, NASA Johnson Space Center, NASA Astronautics Research and Exploration Sciences
Grades K-12

Bring the Moon into your classroom by becoming a certified teacher in the NASA Lunar Sample Disk Loan program. Learn how the rocks brought back by the Apollo missions help us understand the formation of the Moon and its geological history through several hands-on activities.

Thursday, 12:45-4:15pm

Friday, 12:45-4:15pm

A WALKING TOUR OF THE SOLAR SYSTEM

Jeffery Bennett, Big Kid Science
grades K-2

Imagine yourself as a cosmic giant, able to walk (or float!) among planets small enough to hold in your hand. You'd then be able to see what our solar system *really* looks like, giving meaning to the word "astronomical." Well, now you can be that giant, by walking through the Voyage Scale Model Solar System at Space Center Houston. Jeffrey Bennett, who started the Voyage project (and is also author of the Max Science Adventure books), will lead you on a tour of the Voyage model. Be prepared to walk a total distance of a little less than one mile. Note: Bring an umbrella in case of rain; if the weather is bad enough to preclude the actual tour, then we'll meet inside for a discussion of the scale of the solar system and universe. (Limit: 25 people per tour.) Meet at picnic area outside of Space Center Houston entrance

Thursday, 10:00-11:30AM

Thursday, 2:45-4:15AM

Friday, 12:45-2:15PM

Friday, 2:45-4:15PM

Saturday, 8:00-9:30AM

Saturday, 12:15-2:15 PM

Special and Reoccurring Sessions

ISS CONSTRUCTION SIMULATION (Dive Session) (Double Session)

Craig Shannon,
Grades k-12

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 for the Friday session, but you must be in good health and ready to get wet! Repeat session attendees or those with dive experience only may attend the Saturday session. Bring a swimsuit and towel. Participants must attend the mandatory meeting on Thursday, February 3rd at 7:15 AM. Additional \$35 charge for this session

Thursday, 12:45-4:15 PM (24 Educators)

Friday, 12:45-4:15 PM (24 Educators)

OUT OF THE CLASSROOM; INTO THE SKY! CIVIL AIR PATROL'S TEACHER ORIENTATION PROGRAM FLIGHT!(Double Sessions)

Susan Mallet, Debbie Dahl and Bjorn Sundet, Civil Air Patrol

K-12 teachers can join this double session for "ground school" and free Cessna airplane flight over Houston. Activities/materials included. Cameras encouraged!!! Need Civil Air Patrol (CAP) ID# to fly. If not a CAP member, go to www.capmembers.com/joinaem, use Coupon Code: SEEC11 for *special ½ price membership (\$17.50), and receive your CAP ID # via e-mail. (*NOTE: This special ½ price membership fee is for any SEEC attendee to receive over 25 free educational products, be able to fly with CAP at their local airport, and be eligible for awards, grants and lots more!)

Thursday, 12:45-4:15 PM (20 Educators)

Friday, 12:45-4:15 PM (20 Educators)

Saturday, 8:00-11:30 AM (20 Educators)

Special Tours

NASA Tours

AIRCRAFT OPERATIONS TOUR

A plane that creates free-fall, high altitude research aircraft, T-38's, and the Shuttle Training aircraft... Johnson Space Center's Aircraft Operations has it all! Hear how aeronautics is a part of the future of space exploration.

FOOD LAB TOUR/ SYSTEMS ENGINEERING



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. You will also tour the high fidelity simulator which is used to train both the Shuttle and Space Station manipulator systems and rendezvous operations. It includes both a visual dome and a Shuttle Aft Flight Deck and ISS Cupola workstations.



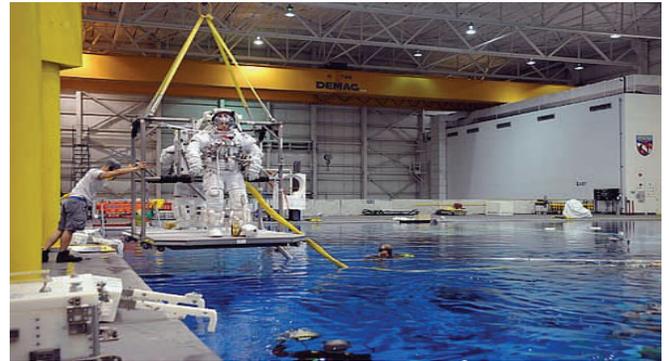
MISSION CONTROL TOUR

Once the shuttle has launched, Houston Mission Control takes over. Visit this secure location that monitors shuttle flights and space station flights 24 hours a day. Based on flight schedules, you may visit both Historic Mission Control, Shuttle Control and ISS Control rooms.

NASA Tours

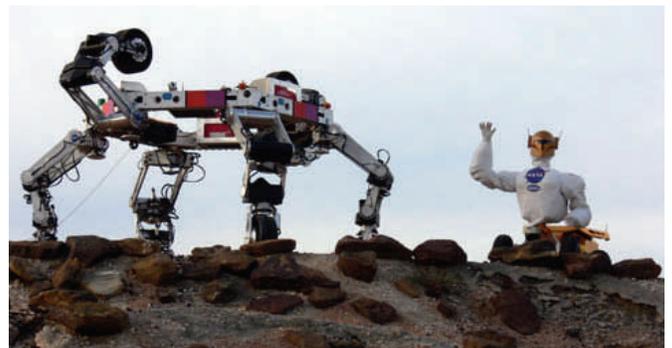
NEUTRAL BUOYANCY LAB TOUR

Take a trip to the largest pool in the world 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!



ROBOTICS LAB TOUR/ LUNAR LAB

Space can be a dangerous place and there are corners that humans just can't reach. Come peek inside the robotics lab at Johnson Space Center and see what engineers have developed to aid the astronauts in construction and maintenance. You will also be one of the few who get to see the Lunar Sample Laboratory. This laboratory is used to house and analyze over 800 pounds of geologic samples from the moon.



**FOR ALL NASA TOURS
CLOSED TOED SHOES
MUST BE WORN**

Special Tours

NASA Tours

SPACE VEHICLE MOCK-UP FACILITY(SVMF)

Explore the training grounds for the astronauts. See full size mock-ups of the Space Shuttle and Space Station. It also includes several other small part task trainers and mockups.



ANTENNA AND TRACKING DEVELOPMENT LAB/ HUMAN SPACE FACTORS LAB

This tour includes several facilities and laboratories including the Anechoic Chamber, used to evaluate properties of antennae and other radiating objects. Then go and see a variety of laboratories used to accommodate the human factor of spaceflight from physical aspects to engineering issues.



HABITABILITY DESIGN CENTER (HDC)

Tour NASA's conceptual, human-centered design studio. The HDC creates opportunities for design to solve the unique challenges of living and working in extreme environments, providing advanced concepts to the NASA community using Human Factors as a design tool to develop products, systems, and architecture.

Tour Guidelines

IMPORTANT NOTICE PLEASE READ CAREFULLY

- Your visit to the Johnson Space Center (JSC) is a special event. You will be entering 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 JSC 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.

All Non- U.s. Citizens

ATTENTION ALL NON-U.S. CITIZENS

If you are not a U.S. citizen, you must fill out a JSC Security Form in order to attend the NASA Tours. Please go to the SEEC website for more information and to download the form.

Special Tours

SCH Tours

EXPLORE THE HISTORY OF MANNED SPACE FLIGHT

Gerri Brown, NASA Alumni 1964-1998

Grades K-12

Your journey into space begins with a tour of Space Center Houston's Starship Gallery and Space Shuttle Mock-up. Trace the progression of America's Manned Space Flight with the actual Mercury "Faith 7" capsule flown by Gordon Cooper, the Gemini V Spacecraft piloted by Pete Conrad and Gordon Cooper, a Lunar Rover Training Vehicle, the Apollo 17 Command Module and the giant Skylab Trainer. Then, explore the Space Shuttle mock-up to find out if you have the right stuff!



SATURN V AND ROCKET PARK

Grades K-12

Travel by tram and take a look at our Mercury-Redstone and Little Joe II rockets. Explore the mighty Saturn V rocket that took astronauts to the moon at our own Rocket Park.



Look up: Space Exploration Educators Conference

Session Selection: 10:00AM-11:30AM

A VACATION IN SPACE

Sandy Sanders, Wiregrass Math and Science Consortium and Diane L Watson, Webb Elementary
Grades K-5

A Vacation in Space... Join Al the "AstroNUT" on the vacation of a lifetime to the International Space Station as he eats, sleeps, and works with the astronauts. Hands-on activities, lesson plans and door prizes will be provided!

AEROSPACE CONNECTIONS IN EDUCATION: BE AN ACE TEACHER!

Angie St. John and Judy Stone, Civil Air Patrol
Grades K-6

Create a high-interest, high achieving, motivated ACE classroom with Civil Air Patrol's Aerospace Connections in Education (ACE) program for grades K-6! You'll receive 9 aerospace lesson plans, a NASA aeronautics CD, a set of solar system cards and you'll learn how to connect aerospace to your grade's curriculum. We'll make flying Fun Shuttles and Geobats! Door Prizes!

EARTHKAM: TAKING PICTURES OF THE EARTH FROM SPACE

Julie Miller and Dr. Karen Flammer, Sally Ride Science
Grades 6-8

Your students can take pictures of the Earth from the ISS with NASA/EarthKAM! Learn how to get your students involved, while participating in engaging, hands-on activities. Teachers will learn how EarthKAM engages students in understanding geography, maps and Earth's surface geology. They will use EarthKAM images to investigate features such as urban areas, water sheds, glaciers and river deltas.

EXPEDITION EARTH AND BEYOND: USING EARTH FOR PLANETARY COMPARISONS

Paige Graff, NASA Johnson Space Center/Jacobs ESCG and Lisa Brown, NASA AESP

Grades 3-12

This session will have you working with stunning images of Earth and comparing Earth to other planetary bodies. Learn how your students can design their own investigations and potentially request an astronaut to take a new image of Earth on their behalf! NASA resources and handouts will be provided.

MAKE SPACE DAY EVERYDAY!

Sharon Eggleston, NE Regional Coordinator for Space Day, Lockheed Martin and Diane Bowen, 8th Grade Astrobiology/Science Teacher, Burnswick Jr. High
Grades 6-12

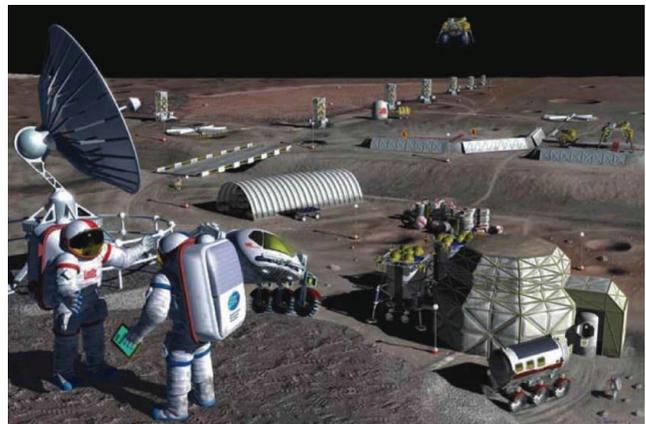
Space Day is an educational initiative that strives to inspire students to explore careers in STEM related areas. Join us for a session of hands-on activities for Grades 6-12 that you can take back to your classroom. Learn about NASA's new program – MoonKAM and how to utilize MoonKAM, EarthKAM and Astrobiology curriculum to motivate your students.

MARKETING THE MOON

Beth Favor, Onslow County Schools and Suzan Scott, Ohio State

Grades 3-8

Excite students with experiments and iPods! In this session you will walk away with lessons to experiment with soil and water, research LCROSS with iPods and brainstorm multimedia avenues to market the moon to others. Lessons for grades 6-8 or modify to 3-5; adaptable for all state curriculums.



MASS VS. WEIGHT: A HEAVY DUTY CONCEPT

Steve Culivan, NASA Stennis Space Center and Lisa Brown, NASA Johnson Space Center

Grades 6-8

"Mass" and "weight" have very different meanings and are often incorrectly used. Newton's Laws of Motion and education video filmed on-board the International Space Station by astronauts will be integrated to explore these two terms. NASA inquiry activities will be utilized in this workshop. Come experience and enjoy this "heavy-duty" topic.

Session Selection: 10:00AM-11:30AM

Thursday February 3rd

MODELING MOTION OF ELECTRICALLY CHARGED PARTICLE IN MAGNETIC FIELD

Lyubomir Detchkov and Bruce Greenspan, Hunter College High School and Karen Greenhaus, Key Curriculum Press

Grades 9-12

Participants will explore the effect of Lorentz Force on the trajectory of an electrically charged particle in a magnetic field through dynamic computer software (Geometer's Sketchpad). Magnetic fields that will be modeled are, homogeneous magnetic fields and dipole, planet-Earth-like magnetic fields. Participants will also model 2-D and 3-D magnetic field lines. Participants should bring a laptop.

NAVIGATION ON/OVER THE EARTH USING MAGNETIC COMPASSES AND MAPS.

Harry G. LaForge, Hoffman Pilot Center and Robert Spencer Radnich, Crawford Central School District

Grades 9-12

Shifting magnetic polarity of Earth/Sun and in space. Space Radiation dangers and uses. States of matter, Van Allen belts, CME, solar wind, plasma. EMS wavelengths, auroras and atmospheric optics. CD/ extensive notes, 9-12 class ready, HANDS-ON exercises.

NEWTON'S LAW - NASA STYLE

Sherrill Reynolds and Christopher Smith, NASA Stennis Space Center

Grades 3-8

Rocket propulsion and Newton's Law of Motion. Educators will participate in STEM related hands-on activities, including constructing and launching rockets! Educators will return to the classroom with everything needed to teach their students including a tool kit containing templates, materials, lesson plans and a hard copy of the NASA Rockets Educator Guide and much more.



SCIENTIFIC SHOWDOWNS: FEATURING SUDOKU AND JENGA SCIENCE CHALLENGE

Shields Templeton, MTSU Laboratory School and Michelle Sedberry, Lubbock ISD

Grades 3-8

Two Master teachers will show how to entice students with original games. We will use the exciting game of Jenga and the challenging game of Sudoku to teach students. These rigorous games will engage your students while at the same time challenge them by questioning their knowledge of space facts.

SPACE IS ALIVE EVEN WHEN YOU'RE FIVE

Kerri Travis and Sarah Niklas, Primrose College Park

Grades K-2

Space is a complex subject for children in the kindergarten and first grade levels. In this session, we will take you through a daily rotation using space in all aspects of the curriculum; including math, reading, science, writing, art and physical development.

STORIES FROM SPACE! HUMAN SPACEFLIGHT KNOWLEDGE AND COOL LESSONS FOR YOUR CLASSROOM

Michael Lutomski and Monica Trevathan, NASA Johnson Space Center

Grades 3-12

NASA has inspired us for decades! How can you employ this exciting history and the future of exploration to motivate students? Learn about human space flight via first-hand stories from a NASA veteran. Access "classroom ready" activities for your classroom (grades 3-12). This educational material focuses on Human Spaceflight and STEM.

Session Selection: 12:45PM- 2:15PM

A DOG, A CHILD, AND THE UNIVERSE (New)

Jeffery Bennett, Big Kid Science

Grades 3-8

Jeffrey Bennett, author of the Max Science Adventure books, will offer a wide-ranging session that will cover topics including ways of inspiring students to love space and science, ways of integrating science across the curriculum, and an overview of the amazing but true scale of the universe. There will be plenty of time for Q&A, and since Dr. Bennett is also the author of the world's best-selling college astronomy textbook, he can probably answer almost any question you have about space science, astronomy, or Max's adventures in space.

ASTOUNDING ASTRONOMY: UNCOVERING THE INVISIBLE UNIVERSE

Pamela Whiffen, NASA Educator Ambassador/Supai Middle School and Douglas Howard, Dunbar School
Grades 6-12

Bring your sense of awe and explore the invisible Universe beyond our solar system, beyond our galaxy, and into the depths of space. Conducted by a NASA Educator, we'll examine the newest discoveries about black holes, the evolution of galaxies, and the properties of dark matter and dark energy. NASA CD supplied.

COLONIZING MARS: THE PHYSICS BEHIND BUILDING A NEW HOME

Maria Barraza and Stephanie Morris, PSJA High School
Grades 6-12

Ever wondered what it would take to live on Mars? How do our earthly forces compare to those that would be encountered on Mars? Come find out - you will build a demo Martian housing complex whose structural integrity will be pushed to its limits.

EXPLORE JUPITER'S FAMILY SECRETS

Christine Shupla and Keliann LaConte, Lunar and Planetary Institute

Grades 3-8

Exploring Jupiter's Family Secrets will acquaint you with Jupiter and NASA's upcoming Juno mission, launching August 2011! Discover Jupiter's monumental size, mass, and gravitational pull and use modeling and experiments to discover Jupiter's unique personality traits, including its dynamic weather, mysterious interior, and amazing magnetic field.



EXPLORING ON THE MOON

Linda Scauzillo, NASA ERC Kennedy and Mike McKee, Merritt Island, FL

Grades 6-8

Our session includes an overview of current lunar exploration. Participants will design a model of the LCROSS satellite and a model of a lunar lander, while using the engineering process. Participants learn how to incorporate NASA hands-on activities, engineering design processes, and integrated lessons into their classrooms.

KISSING SPACE: MISSION L.A.U.N.C.H.

Martha Bixler and Suzanne Lisenby, Liberty Park Elementary-Vestavia Hills City Schools

Grades K-5

KISSing Space: Mission L.A.U.N.C.H. Discover how Learning Adventures can make New Cosmic Heroes! Be inspired to integrate Space Exploration throughout your curriculum. Discover simple ideas and activities that bring the universe to your classroom. We have all new lessons, and activities, but don't worry; we're still Keeping It Simple, Sweetie!

Session Selection: 12:45PM- 2:15PM

MOBILE AIR-POWERED RECOVERY SYSTEM (M.A.R.S)

William C. Luke, Central Texas College and Gregory P. Luke, Temple High School

Grades 6-12

Educators will work as a team to build a Mobile Air-powered (balloon) Recovery System (M.A.R.S) using a 16-20 oz. plastic bottle, bottle caps, balloons, straws, shish-kabob skewers, Dixie cups, film canisters, and duct tape. Vehicle must be able to travel 5 meters in a straight line and transport a cargo of pennies.

NASA'S DO-IT-YOURSELF PODCAST

Denise Miller and JoCasta Green, NASA Educational Technology Services

Grades 3-12

The Do-It-Yourself Podcast makes it easy to find and download multimedia content for building podcasts with students. In this session you will learn about DIY Podcasting and be led step-by-step through building your own audio and video podcasts. We'll also share ideas for creating excellent products and evaluating student podcasts.

ORANGE-SALAMI IN SPACE (New Session)

Carla Rosenberg, NASA Headquarters and Renee Elias, NASA CORE

Grades K-5

No sitting on your hands in this session. Come prepared to make origami astronauts, space shuttles, and aliens! Prizes and handouts included.

REACHING FOR THE FUTURE

Dee Mock, Center for Education Outreach, Baylor College of Medicine and Christine Graham, McKinney ISD

Grades 3-5

Spark your student's interest in space exploration by participating in activities that promote collaboration and teamwork! Create grappling devices, Venn Diagrams, concept maps, and models. Get ready to experience out-of-your-seat fun that will encourage your students to reach for the future!

REMOTE ROBOTICS MISSIONS FOR STUDENTS - SENSING AND CONTROL ACROSS SPACE

Daniel John Loewen, Fresno County Office of Education and Daniel A. Wray, Warsaw Community Schools - NEAT Teachers

Grades 6-12

Collaborate with colleagues across the hall or across the nation while preparing your students for continued planetary and asteroid exploration with NASA. Three easy, high-tech, low cost, and engaging hands on activities will bring the grand adventure of current NASA remote sensing and robotic research to your school.



UNLOCKING THE MYSTERIES: NASA'S DISCOVERY MISSIONS DELIVER SOLAR SYSTEM SCIENCE

Kay Tobola and Jaclyn Allen, NASA Johnson Space Center

Grades K-12

Experience the excitement of NASA's Discovery missions; take home standards-aligned activities that challenge students to investigate solar system science. NASA's Discovery Program encompasses 10 exciting planetary science investigations each with hands-on activities related to its science. "Unlocking the Mysteries" DVD with mission video, activities, and a design challenge is included.

WEIGHT WATCHERS (New Session)

Veronica Seyl and Deborah Hutchings, Johnson Space Center

Grades 6-8

This session will give you an insight into the world of Microgravity. Hear about research from NASA's Reduced Gravity Education Flight Program, and learn how to involve your classroom in microgravity research.

Session Selection: 2:45PM- 4:15PM

IT'S A SMALL WORLD AFTER ALL: NANOTECHNOLOGY AND SPACE

Bobby Gagnon and Elias Molen, The Space Foundation
Grades 6-12

Imagine manipulating materials at the molecular level to create anything we want! With two hands-on activities this session will give you plenty of information about the development of nanotechnology and it's possibilities. Come and see what nanotechnology can do for us on Earth and up in space!

LIGHT AND COLOR

David Temple and Brandon Pigeon, Longview High School
Grades 9-12

An interactive workshop that will explore light and color. Participants will use lasers and hand held spectrometers to examine emission spectrums, as well as investigating why the sky is blue and the reason we use a red, orange or yellow crayon when we draw the sun.

MARS HERE WE COME!

Leigh Schwarzel, Morrison Elementary and Mare Gilmore, U.S. Space Rocket Center
Grades 3-8

Have you ever wondered what it would be like to explore Mars? How would you get there, what would you study, and how would you live? This session will utilize hands-on activities to give you the background needed to investigate these questions in your middle school classroom. Lesson CD included.

MOONKAM: EXPLORING LUNAR IMAGES

Lessa Hubbard and Dr. Karen Flammer, Sally Ride Science
Grades 6-12

Learn about NASA's GRAIL mission, which will place two satellites in orbit around the Moon in spring 2012 to precisely map the Moon's gravity. Each satellite will carry special MoonKAM cameras and middle school students will be able to request images of the lunar surface. Learn how, while participating in engaging, hands-on activities to teach lunar science and what can be seen in pictures of the lunar surface.



NASA EARTH EXPLORERS - STUDYING EARTH THROUGH THE EYES OF SATELLITES

Bonnie Murray, NASA Langley and Michelle Wise Bellard, Owner/Educator Mind Builders LLC, JPL Nevada Solar System Educator
Grades 3-8

Explore the world of satellites using hands-on experiments to understand the technology satellites employ and the data they provide. Travel through orbital paths with JPL's 'Eyes on Earth' 3D technology. Use GPS to identify pixels and learn how to analyze images and design your own 3D images with ImageJ software.



Look up:
Space Exploration Educators Conference-SEEC

Session Selection: 2:45PM- 4:15PM

NASA NEEDS ENGINEERS! (INTRODUCTION TO THE ENGINEERING DESIGN PROCESS)

Dr. Susan Hoban and Michelle Graff, University of Maryland Baltimore County & Goddard Education
Grades 3-8

NASA needs engineers; kids love to create things! Participants tackle a problem NASA faces: design and build a Lunar Rover and its landing system to arrive intact and upright on the lunar surface. The Engineering Design Process is the focus, using the following process skills: designing, measuring, calculating, and evaluating.



NASA ROBOTICS AND YOU!

Teresa Sindelar and Trinesdha Dixon, Teaching from Space, Johnson Space Center
Grades K-12

This session's goal, brought to you by NASA educators in the Teaching From Space Office, is to provide teachers with tangible robotic activities and demonstrations. We will be creating an end effector used on the ISS, manipulating a robotic hand, as well as browsing the Robotics website.

SOAR TO THE STATION AND THE NEXT GENERATION

Jerry Hartman and Carla Rosenberg, NASA
Grades 6-8

Come and learn about what is scheduled for NASA's human space flight program in upcoming years. We will discuss Shuttle and Station activities and changes to the Exploration mission. We will also provide information about new and ongoing education materials for use in your classroom, and opportunities for professional development.

SPACE PHYSIOLOGY; A FLIGHT SURGEONS TALE

Dr. Bill Tarver NASA's Johnson Space Center

Grades K-12

How does the human body behave in the space environment? The lead NASA Constellation Program Flight Surgeon will cover the typical problems faced by astronauts and some of the obstacles ahead of us for missions to the Moon and Mars.

TINY BUBBLES: THE SCUBA CONNECTION

Christy Garvin, Vaughan Elementary, NEAT & NASA EPDN and Kathleen Woodring, NEAT

Grades 6-8

Dive in and learn how astronauts train for spacewalks by scuba diving in the NBL. Participate in "wet" experiments, build a diving squid, and explore math activities related to EVA training. Learn about NASA's electronic Professional Development Network and free STEM courses that are offered on spacewalks, scuba diving, and spacesuits.

TO INFINITY AND BEYOND: THE JOURNEY FOR A MODEL ROCKET

Brian Krauklis, Nottingham Country Elementary and Joshua Girard, Katy, TX

Grades 3-12

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.

USING DRAMATIC PLAY TO UNDERSTAND LIFE IN SPACE

Jeffrey Kolowith, Tampa, FL and Brigid Malecki, Bradenton, FL

Grades K-2

Participants will learn to help students use dramatic play, models, hands-on activities and role playing to explore and familiarize students with space and with living in space.

Session Selection: 10:00AM-11:30AM

ASTRONOMY IN THE CLASSROOM

Marcy Novak, Pleasant Lane School and Sr. Alma Messing, Chicago Archdiocese
Grades 3-5

Your students will work like astronomers to experience several redefining discoveries about our universe. From Galileo to Hubble to NASA's Great Observatories, the activities provide a multi resource, hands-on learning adventure.

AWESOME ASTRONAUT DEMOS THAT GUARANTEE STUDENT UNDERSTANDING

Dave Schlichting, Eaglecrest High School
Grades 3-12

If you have students that struggle with concepts like Lunar Cycles, Precession, Doppler Shifts, and the Expanding Universe - this session is for you! We will model demonstrations (with handouts) that cover all these topics - AND MORE. Participants will also build a battery operated DOPPLER BALL for their classroom!

BEYOND UFO'S: THE SEARCH FOR EXTRERRESTRIAL LIFE AND ITS ASONISHING IMPLICATIONS FOR OUR FUTURE.

Jeffery Bennett. Big Kid Science

Grades: K-12

Is there life beyond Earth? Jeffrey Bennett, author of Beyond UFOs and of the Max Science Adventure series for children, will talk about why this question has become a hot topic of scientific research, and discuss how scientists are searching for life in the universe. Along the way, we'll also see why the possibility of life beyond Earth has profound implications to the future of our species, even in the unlikely event that we are alone in the universe

BRING THE UNIVERSE TO YOUR CLASSROOM

Stacy DeVeau, Arizona NASA Educator Resource Center and Alexis Harry, NASA Aerospace Education Services Project

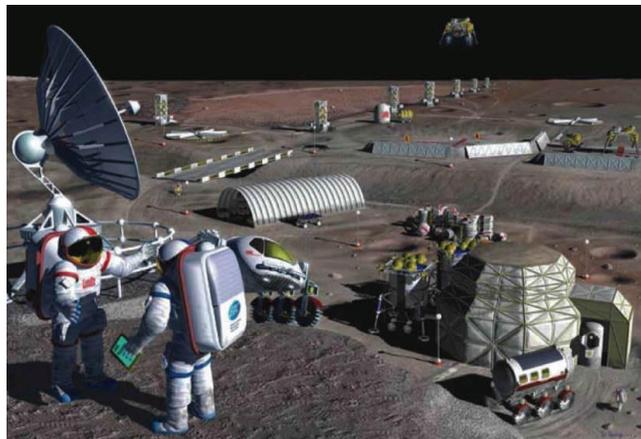
Grades 6-12

Receive free classroom posters and activities to engage students in the origin and evolution of the universe. 'Travel through time' to learn about astronomical discoveries of the day as they are made. Participate in activities related to gravity, the expanding universe, the nature of science, and distances in the universe.

ELEVEN ESSENTIAL EXPERIMENTS FOR ENLIGHTENED EDUCATION

Lania Rosengren and Joshua Santora, NASA Kennedy Space Center
Grades 6-8

The presentation will consist of 11 quick hands-on, fun-filled, exciting experiments which are primarily applicable in the middle school science class. However, they can be modified for use at other grade levels or in various content areas.



EXPLORING MOBILE DEVICES FOR SPACE RELATED LEARNING

Richard Healey, Nuneaton, UK and Mike Grocott, Cornwall, UK
Grades K-12

Augmented Reality, the combining of computer generated graphics and information overlaid over live images, has the potential to be a powerfully engaging and effective learning tool. Leading practitioners from the UK will share with you, in this hands-on session, how you can use AR in your own lessons.

EXPLORING THE YEAR OF THE SOLAR SYSTEM

Christine Shupla, Lunar and Planetary Institute and Jaclyn Allen, Johnson Space Center Astromaterials Research and Exploration Science Education
Grades K-12

NASA's Year of the Solar System is a celebration, beginning in October 2010 and continuing for one Martian year (687 Earth days). NASA's missions in this period create an opportunity to engage students in new worlds and new discoveries! Activities, events, and resources will be shared.

Session Selection: 10:00AM-11:30AM

GADGETS, GIZMOS AND CONTRAPTIONS - BUILD ON THE MOON

Angelo Casaburri, Aerospace Education Services Project

Grades 6-8

The adventure of designing and building on the Moon is based on NASA's Lunar exploration missions. Students will design, build, test, and redesign to invent creative solutions using inexpensive, locally obtainable materials. The "On the Moon" Educator Guide has six different hands-on engineering challenges.

GRAVITY: THE INVISIBLE FORCE

Margaret Baguio, Texas Space Grant Consortium and Suzanne Foxworth, Watagua Middle Schools

Grades 3-8

Gravity: you can't see it, touch it or feel it. Yet, it's everywhere. Participants will conduct experiments, learn how NASA is mapping Earth's gravity field, how Earth's gravity maps are assisting with climate change studies, and take home curriculum and activities for the classroom.

HOUSTON, WE HAVE A SOLUTION!

Colleen Howard and Karri West, Mesa Public Schools

Grades 3-8

Take one small step for teachers, one giant leap for STEM education! Take your students on an amazing journey as they sit in the command module, talk to mission control and take part in a space simulation that will leave them wanting more. Empower students to learn ~ experience science in action!

MODELING PROJECTILE MOTION AS AN ATTEMPT FOR DEMYSTIFYING ROCKET SCIENCE

Lyubomir Detchkov and Bruce Greenspan, Hunter College High School and Karen Greenhaus, Key Curriculum Press

Grades 9-12

Participants will explore Newton's Laws of Motion and Gravity through dynamic computer (Geometer's Sketchpad) models of: Projectile motion close to Earth and orbital motion. Additional handouts and a CD with activities will be available. **Participants should bring a laptop.**

NASA RESOURCES FOR YOUR ROBOT INVASION

Karen M. Kelley, NASA Marshall Space Flight Center ERC

Grades 3-12

Robots fascinate students and provide an interdisciplinary experience that builds knowledge, skills and confidence- join me for an overview that will jump start your classroom's robot invasion. After a brief introduction to robot basics and some of NASA's robotic explorers, you'll explore some NASA hands-on and web-based activities that will help clarify aspects of robots and how they relate to classroom concepts- as well as the engineering design process. Participants will have a chance to see how a LEGO Mindstorm robot works, and receive an overview comparing several popular robotics competitions.

SPACE ON A SHOESTRING

Sandy Armstrong, Wiregrass Math and Science Consortium and Dr. Shawn Plash, Troy University

Grades 3-8

Participants will receive an extensive lesson plan booklet of inexpensive and motivational ideas for teaching some of the most important concepts in space science like the solar system and star temperature. Door prizes will be given as well as samples of Moon and Mars simulant soil.

WEB 2.0 MAKES SPACE SCIENCE GO BAM!

Dana Kickler and Juana Dorado, Northside ISD - Locke Hill Elementary

Grades 3-8

Just like Emeril Lagasse can make food go "BAM!", Web 2.0 can make your space science lessons do the same! We will cook up some fabulous space food lessons using Web 2.0 tools that enable students to collaborate with others around the world! Come Infuse your space unit with FLAVOR!

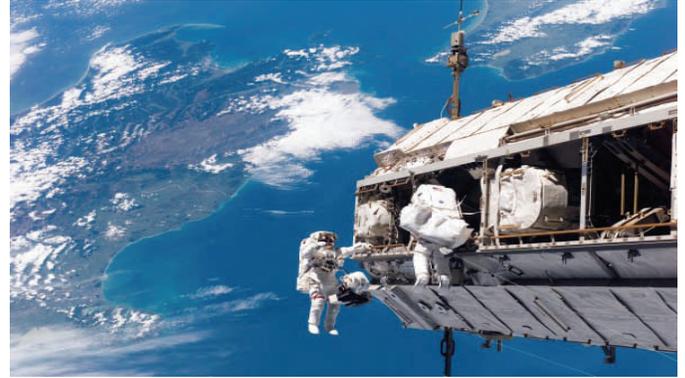
Session Selection: 10:00AM - 11:30AM

ZOOM! ZOOM! SATISFYING THE INSATIABLE PRE-K OR KINDERGARTEN SPACE BRAIN!

Diane Phillips and Keren Cohen, Lester B. Pearson School Board Canada

Grades K-2

This session helps students practice, prepare and dream while reaching for the future of space exploration. As space educators and teachers, we have found many diverse ways to explore and address the questions posed by the minds of 4 and 5 year olds. The answer to directing the students to their 'Space Place of Learning', is through discovery, imagination, play, tactile learning and good old fashion fun! Our attendees will gain simple methods and learning situations that are painless for educators to learn and great fun to teach in any classroom. The participants will experience a minimum of 10 hands-on learning situations through our 'Discover Bag Learning Situation Stations'.



Session Selection: 12:45PM - 2:15PM

A HANDS ON EXPLORATION OF FLUID DYNAMICS

Loren Lykins and Charla Jordan, Carlisle High School
Grades 9-12

Fluid Dynamics! Good demos, great labs, and spectacular paper airplanes... This is a hands-on presentation, so get ready to have some fun. Instructions for demos and lab activities will be included along with web-sites for NASA extension activities.

ASTRONAUT RESCUE

Suzanne Foxworth, Solar System Educator and Michael Myers, Liftoff & SEEC Alumni
Grades 3-8

Teachers will engage in a rescue mission of a stranded space shuttle where they will use their critical thinking skills to eliminate and discover possible locations for the shuttle. This lesson will use Skype to simulate communication between a space station and mission control. CD's with needed materials is provided.

BEYOND OUR SOLAR SYSTEM WITH NASA'S EDUCATION RESOURCES

Les Gold and Lester Morales, NASA Kennedy Space Center and Penn State University
Grades 6-12

Using NASA's education resources participants will conduct hands-on activities to help understand the concepts of the Expanding Universe, the Red Shift, Creation of Black Holes, and our Solar System's place in the universe.

BUTTERFLIES, SPIDERS AND PLANTS - REAL SPACE SCIENCE IN YOUR CLASSROOM

Gregory Vogt and Deanne Erdmann, Center for Education Outreach, Baylor College of Medicine
Grades K-12

Do real science in your classroom. Have your students conduct science investigations in 1-G while ISS astronauts conduct them in microgravity. Learn what happened during the STS-129 "Butterflies in Space" investigation. Join thousands of teachers and students around the world and get ready for the next flight opportunity.

Session Selection: 12:45PM - 2:15PM

CAN I SEE YOU NOW??

Adair Teller, Bellflower Unified School District and Paula Garrett
Grades 6-12

Space Chicks Present: Can I See you Now?? Hands-on activities will show: How do we find planets around other stars? Or How do we know it's there? Why do we need many ways to detect planets? What are four ways we are (or will be) detecting planets around a star? What missions has NASA prepared to find Earth-like planets? Do you know how or why to "spin stars"? What is a wobble? Why is it useful??

DIGITAL STORYTELLING

Gary Kitmacher, NASA and University of Houston
Grades 3-12

Digital Storytelling is the practice of using computer-based tools to tell stories. As with traditional storytelling, most digital stories focus on a specific topic and contain a particular point of view. However, as the name implies, digital stories usually contain some mixture of computer-based images, text, recorded audio narration, video clips and/or music. Digital stories can serve a new way for students to learn about the space program and to tell the story of the space program to others. During this session attendees will receive a copy of a Space Exploration Digital Storytelling Guide, an overview of the Guide will be presented, examples of digital stories will be shown, and examples of the use of digital image and video software will be demonstrated.

HANDS ON EXPERIMENTS THAT ALLOW STUDENTS TO FEEL LIKE ASTRONAUTS

Dr. Craig Wilson, Texas A& M University and USDA/ARS
Grades 6-12

'Hands-on experiments that allow students to feel like astronauts.' Try out experiments that will allow your students to collect data to study the importance of exercise for astronauts to maintain their musculoskeletal system in microgravity. You will also study and experience spatial disorientation. Teacher developed lessons.

FROM NEAR OR FAR, BRING SPACE CENTER HOUSTON TO YOUR CLASSROOM

Space Center Houston Educational Specialists
Grades K-12

No matter where you might be located, Space Center Houston can be a part of your students' world. Find out about The Educator Resource Center for JSC. Connect live with video-conference and webcasting as well as enjoy Overnight School Visits and Space Schools. Receive a CD of lessons to implement in the classroom. Participants may enter for a chance to win free distance learning events, 2012 SEEC admissions and discounts on other programs. Provide the relevant and rigorous experiences your students deserve!

LEGO WEDO ROBOTICS - HAM'S SPACE ADVENTURE

Bev Ketron, iSPACE and Sharon Young, iSPACE
Grades K-5

LEGO WeDo Robotics is an ideal tool for engaging early elementary-aged students and introducing them to the exciting world of robotics. You'll be able to create a LEGO model of Ham the Astrochimp and program him to drum some cool rhythms to celebrate his spaceflight accomplishments. (Watch out MaxQ!)

MASS VS. WEIGHT: A HEAVY DUTY CONCEPT

Steve Culivan, NASA Stennis Space Center and Lisa Brown, NASA Johnson Space Center
Grades 6-8

"Mass" and "weight" have very different meanings and are often incorrectly used. Newton's Laws of Motion and education video filmed on-board the International Space Station by astronauts will be integrated to explore these two terms. NASA inquiry activities will be utilized in this workshop. Come experience and enjoy this "heavy-duty" topic. *(This is a repeat session)*

Session Selection: 12:45PM - 2:15PM

MATHEMATICS IN THE SKY: FLY BY MATH AND LINE UP TO MATH

Ruth Mare Oliver, U.S. Space & Rocket Center and Rhonda Cox, Orion High School

Grades 3-8

This session is designed to show instructors new ways to teach distance-rate-time problems by using the real life application of air traffic control. Using Smart Skies curriculum and personal experience as a teacher and pilot this presentation will be useful and exciting. Math has never been so "high speed"!

NASA'S PROBLEM-BASED INSTRUCTIONAL UNITS

Diane McElwain, NASA Glenn Research Center

Grades 3-8

NASA's educational specialist will discuss and demonstrate the Problem-Based Instructional Units (PBIU) for Physical Science online instructional program. Educators can transform their classrooms into a learning environment where students will investigate the challenges found within NASA's future lunar outpost. NASA's PBIU instructional resources will be discussed, demonstrated and distributed.

SCIENTISTS WRITE, RIGHT?

Amanda Ewenson and Vanessa Villereal, Northside ISD

Grades K-5

Scientists still write, right? Yes, they do! One important part of a scientist's job is to record their thoughts and observations before, during and after procedures. In this session, we'll guide you to construct your own science notebook and give you some variations for using it including an online version. By the end of the class, each participant will have created a science notebook to take home and will have used it during an example experiment.

SPACE EDUCATION IN JAPAN

JAXA

Grades K-12

Japan Aerospace Exploration Agency (JAXA) and experienced Japanese educators present unique teaching methods developed for classrooms in Japan. You will learn interactive and useful teaching methods that provide exciting classroom activities for students. This session is perfect for educators to discuss future collaboration with Japanese educators and foster international relationships.

USING MYSTERY AND MAYHEM TO IGNITE ENTHUSIASM IN THE NON GEEK

Tom Holcomb and Becky Holcomb, KCSC

Grades 6-8

This session will include stories, descriptions and activities to capture and ignite the imagination of students who are not currently interested in space or rocketry!



Session Selection: 2:45PM - 4:15PM

BERNOULLI WILL NEVER LET YOU DOWN! (BUILDING FOUNDATIONS OF FLIGHT)

LORI BETH BRADNER AND GEORGE Bartuska, Central Florida Aerospace Academy of Kathleen High School
Grades 6-12

How does an object with a gross weight of 77,110 kg actually stay in the air? Come join us as we engage, explore and explain these and other questions with 5 hands-on classroom experiments with actual airfoil construction built to elaborate on the foundations of flight.



CHARACTERISTICS OF STARS: EDIBLE AND CRAFTY EDUCATION

Jennifer Elberg and Rebecca Karrow, Maine Township
207

Grades 6-8

Learn characteristics about stars in a creative, innovative and affordable manner. This includes hands-on activities, cooperative learning strategies and problem based learning methods. Middle school and early high school teachers will learn about mass, size, colors and constellation configurations as well as moon phases through the use of edible activities.

EXPLORE ICE WORLDS

Lynne Hehr, University of Arkansas Center for Math and Science and John Hehr, University of Arkansas Department of Geosciences and Arkansas NASA ERC
Grades 3-8

Explore ice on Earth and across the Solar System during this hands-on session of observation and discovery. Learn about the properties of ice, where it's found on other planets and moons, and determine how important ice is to Earth's climate future. Loads to do and loads to take back to the classroom!

FILTERING THROUGH SPACE

Sr. Alma Messing, Archdiocese of Chicago and Marcy Novak, Pleasant Lane School

Grades 3-8

To expand what is seen in the exploration of space, scientists use color and polarization filters. We will work with both filters in activities and explain the why of each result.

INVESTIGATING FLIGHT

Nancy Gealow, Smith Elementary and Gene Gealow, Dueitt Middle School

Grades: 3-5

Participants will make and take 6 different flying vehicles. Most of the vehicles are from recyclable material that can be easily gathered. Discussion will be given on how to use these space crafts in experimental designs to use in the classroom. Ideas can be used in individual classrooms, science clubs and for celebration of Space Day. Come fly with us!

NASA FIT EXPLORER: TRAIN LIKE AN ASTRONAUT

Nubia Carvajal and Ali Llewellyn, NASA Johnson Space Center, Human Research Program Education Outreach
Grades 3-5

Join NASA educators in a variety of fitness activities and hands-on science explorations. Fit Explorer is a scientific and physical approach to human health and fitness on Earth and in Space. Learn how astronauts train - and together we can inspire future explorers to train like an astronaut.



Session Selection: 2:45PM - 4:15PM

SCIENCE MISCONCEPTIONS IN OUR CLASS, CORRECT THEM, DON'T TEACH THEM

Rob Radnich, Physics Teacher Meadville Area Senior High and Harry LaForge, Hoffman Pilot Center
Grades K-12

Science misconceptions are everywhere. How do we stop them from coming into or even worse leaving our classroom? Learn about common science misconceptions and how to teach the correct science. Learn how to use demonstrations and activities in your class. Learn how to find out about science misconceptions.



SEND YOUR SCHOOL TO SPACE FOR A WEEK

Bill Decker and Keith Clarke, C. O. Wilson Middle School
Grades 6-12

Come find out how we incorporated all subjects; Math, History, Science, English, Art ect., into a week long unit on Space and Space Travel. CD of materials and manipulatives will be issued while supplies last. A hands-on activity will be incorporated in the presentation.

THE UNIVERSE IN YOUR CLASSROOM

Javier Montiel, Brazosport ISD, Velasco Elementary
Grades K-4

Soar to the moon, Mars and beyond! Create a virtual fieldtrip through the Universe using exclusive lesson plans, videos and sample materials. Participants will work in activity stations, view videos of the virtual field trip, and take home lesson plans. Great session for bilingual audiences.

USING ASTRONAUT PHOTOGRAPHS TO DISCOVER THE SPHERES OF EARTH

Paige Graff, NASA Johnson Space Center/Jacobs ESCG and Lisa Brown, NASA AESP
Grades 3-12

Work with stunning astronaut images to discover the Spheres of Earth, Earth System Science and to help spark student-driven research in your classroom. Learn how your students can design an investigation, work with a mentor and potentially request new images of Earth! NASA resources and handouts will be provided.

USING NASA MUSEUM EXHIBITS TO TEACH THE HISTORY OF NASA'S HUMAN SPACEFLIGHT

Sherre L. Boothman, Chandra X-Ray Observatory Resource Agent and Laura Bajza, Lehman High School
Grades 9-12

Using the museum section of the Space Center Houston and the Saturn V Pavilion, we will conduct a walking tour of the history of human spaceflight. The materials will include a complete listing of all US human spaceflights. The tour will focus on details of the spacecrafts used and highlights of explorations conducted by the crews. Along with session materials, participants will receive a DVD with details on each spacecraft flown by the USA with prepared units for Newton's Laws of Motion in science, and the birth of NASA from the Cold War in the 1950's – 1970's for social studies classes. The future of human spaceflight will also be discussed emphasizing the use of what was learned to enhance future efforts.



Session Selection: 2:45PM - 4:15PM

WEIGHT WATCHERS (New Session)

Veronica Seyl and Deborah Hutchings, Johnson Space Center
Grades 6-8

This session will give you an insight into the world of Microgravity. Hear about research from NASA's Reduced Gravity Education Flight Program, and learn how to involve your classroom in microgravity research. *(This is a repeat session)*

WHAT TO WEAR WHEN YOU'RE OUT THERE

Heather Paul, NASA's Johnson Space Center
Grades K-12

Meet a Spacesuit Engineer and see the latest spacesuit ideas coming off the NASA runway and learn how students can become fashion designers to the stars!

YOU ARE HERE: SIZING AND SEEING OUR INVISIBLE UNIVERSE

Dr. Tyson H. Harty Astrophysics Educator Ambassador, NASA Education & Public Outreach, Sonoma State University and Jehan El-Jourbagy, Workshop Assistant.

Grades 6-12

The Universe is a big place. But just how big is big? "Scale the Universe" as we investigate the powers of ten. And just how do we "see" our invisible Universe? Explore the properties of light waves—from radio to gamma—with hands-on activities. Two free NASA activity guides included.

Sat. Session Selection: 8:00AM - 9:30AM

A THEMATIC APPROACH TO MARS EXPLORATION

Laurin Allen, Bryan ISD, Susan Hammond, Bryan ISD and Nick West, St. Joseph Catholic School
Grades 6-8

The experiences of the Corp of Discovery will be compared to other explorers through out history and to a possible expedition to Mars. The presentation will focus on historical aspects of the human discovery in new lands and the problems that these expeditions faced. We will also evaluate what explorers might learn from these previous expeditions to other planets and what their experiences teach us.

AN INTRODUCTION TO NEON, THE NASA EDUCATORS ONLINE NETWORK

Chris Gamrat and Keith Duclos, NASA AESP, Penn State University
Grades K-12

This session presents "NEON," the NASA Educators Online Network, which uses a peer-to-peer approach to provide individualized professional development to STEM teachers. Participants will learn about how NEON works, how to become a member, and how it connects NASA content to standards-based teaching.

ASTEROID MYSTERIES!

Jaclyn Allen and Mike McGlone, NASA Johnson Space Center
Grades 6-12

Participants in Asteroid Mysteries! will experience activities that connect meteorites that NASA has in their labs with asteroids through a set of spectra matching activities. The middle to high school data-rich activities tie directly to the Dawn mission that will orbit asteroid 4 Vesta in 2011 and return data.

COPERNICAN MATHEMATICS (YES, THERE WAS MATH INVOLVED)

Sandra Miller and Stephanie Smith, Lamar High School
Grades 9-12

The Copernican Revolution could not have occurred without mathematics, particularly the work done by Copernicus and Kepler. How long is Mars' year? How far away is Mars? Take home some "real(ly-out-of-this-) world" problems for Algebra and Geometry.

Important: Please bring a scientific calculator.

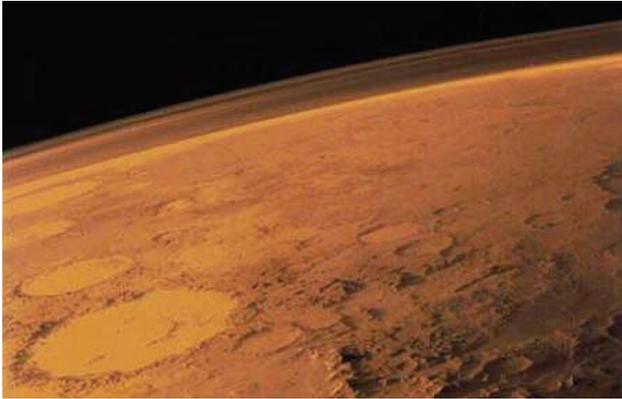
Session Selection: 8:00AM - 9:30AM

EXPLORATION THROUGH LEGO NXT ROBOTICS.

Suzanne Foxworth, Solar System Educator and Michael Myers, Liftoff & SEEC Alumni

Grades 3-12

Learn about the role of robots and your students in the future of space exploration. Participants will be programming NXT Robots in hands-on activities. Learn how to make NXT Robotics a part of your classroom. There will be door prizes and CD's for participants.



FIELD TRIP TO THE MOON

Lynne Hehr, University of Arkansas Center for Math and Science and John Hehr, University of Arkansas Department of Geosciences and Arkansas NASA ERC

Grades 6-8

Experience hands-on activities, team building strategies, science and engineering career information, and a virtual journey to the Moon created by using NASA engineering models and scientific data. Come face-to-face with challenges and the excitement of launching from Earth's surface and journeying through space to land on the Moon. Explore Ecosystem, Geology, Habitat, Engineering, Navigation and Medical investigations during this fast-paced session!

LIVING ON THE ISS

Brian Ewenson, San Antonio and Brian Jackson, Ralph McCall School

Grades 6-12

What do the astronauts experience on the ISS? What do their bodies go through? What do they eat? Do they have any fun? What do they do with their time? Find out in this hands-on, minds-on session!

IT'S LUNACY!

Dawn Burbach, Stuart Place Elementary and Rita Galloway, Bonham Elementary

Grades K-2

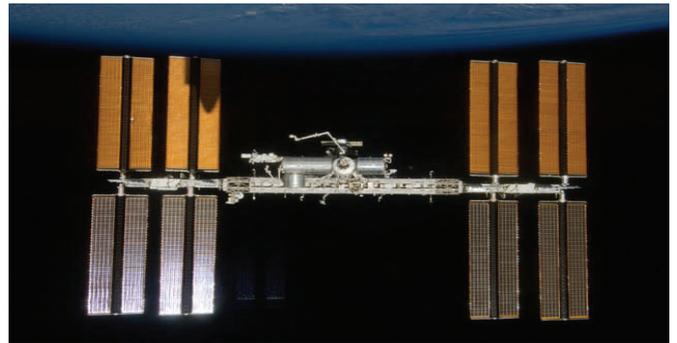
Our session is geared toward teachers of grades K-3. This year we will be exploring the moon which makes for a great starting point to explore the universe. Each participant will learn how to create a game using Microsoft Excel as well as receiving a CD with all the Excel directions, templates, activities, projects, lesson plans, ect. to be able to use as soon as they return to school. During our session teachers will have the opportunity to participate in many hands-on activities.

KISSING SPACE: MISSION L.A.U.N.C.H.

Martha Bixler and Suzanne Lisenby, Liberty Park Elementary-Vestavia Hills City Schools

Grades K-5

KISSing Space: Mission L.A.U.N.C.H. Come discover how Learning Adventures can become Cosmic Heroes! Be inspired by the Space Exploration throughout your curriculum. Discover simple ideas and activities for bringing the universe to your classroom. You will have all new lessons, and activities, but don't worry; we're still Keeping It Simple, Sweetie!



NASA'S - A "TAIL" OF TWO COMET MISSIONS

Dee McLellan, JPL - NASA Solar System Educator and Karen Abrahams, Challenger Learning Center New Mexico

Grades 6-8

On February 14, 2011, a comet spacecraft, Stardust NExT, will arrive at Tempel 1 to photograph its features. Build a stereoscope and look at those images in 3D! Learn about comets playing a fun, fact-filled game! Trace the history of comets as you make a timeline. Plan and design a spacecraft/comet rendezvous!

Session Selection: 8:00AM - 9:30AM

SMALL BODIES IN THE SOLAR SYSTEM

Joyce Hill and Rebecca Moreland, Highland Middle School

Grades 3-8

Our solar system consists of the Sun, the eight official planets, and at least three "dwarf planets", There are more than 130 satellites on the planets, a large number of small bodies, and the interplanetary medium. Take a tour of our solar system and learn more about comets, meteorites and asteroids.



STAR CHALLENGERS: MOONBASE CRISIS

Julie Muffler, Challenger Learning Center New Mexico and Seth McFarland, Unser Racing Museum

Grades 3 - 6

Come learn about the Star Challengers book series and receive a copy of the first book, Moonbase Crisis. Dr. June Scobee Rodgers, widow of Challenger 51-L Commander Dick Scobee, introduces the Star Challengers in this newly released pre-teen book series. This session will feature hands-on science activities developed to accompany the book or to use as a stand-alone with session attendees participating in the activities. Each participant receives a copy of the book, teacher's guide, and a CD of additional science activities.

Session Selection: 10:00PM - 11:30PM

A DOG, A CHILD, AND THE UNIVERSE (New)

Jeffery Bennett, Big Kid Science

Grades 3-8

Jeffrey Bennett, author of the Max Science Adventure books, will offer a wide-ranging session that will cover topics including ways of inspiring students to love space and science, ways of integrating science across the curriculum, and an overview of the amazing but true scale of the universe. There will be plenty of time for Q&A, and since Dr. Bennett is also the author of the world's best-selling college astronomy textbook, he can probably answer almost any question you have about space science, astronomy, or Max's adventures in space.

FOLDING SPACE: THE GEOMETRY OF ORIGAMI

Sandra Miller and Stephanie Smith, Lamar High School

Grades 6-12

Origami is more than paper animals—from heart stents to space telescopes, origami principles and the underlying geometry have applications far beyond handicrafts. What can origami teach us about geometry and vice versa? What does origami have to do with space telescopes? Find out in a hands-on exploration of geometry.

FROM NEAR OR FAR, BRING SPACE CENTER HOUSTON TO YOUR CLASSROOM

Space Center Houston Educational Specialists

Grades K-12

No matter where you might be located, Space Center Houston can be a part of your students' world. Find out about The Educator Resource Center for JSC. Connect live with video-conference and webcasting as well as enjoy Overnight School Visits and Space Schools. Receive a CD of lessons to implement in the classroom. Participants may enter for a chance to win free distance learning events, 2012 SEEC admissions and discounts on other programs. Provide the relevant and rigorous experiences your students deserve!

KINDERNAUTS

Dan Malerbo, Carnegie Science Center

Grades K-2

Find out how to excite and involve your youngest students in manned and robotic space exploration. Discover the right hands-on activities that will introduce them to the solar system and concepts of gravity and microgravity. Discover how to introduce your young learners to robotic spacecraft, the space shuttle and the International Space Station. Handouts and door prizes provided.

Session Selection: 10:00PM - 11:30PM

MARS EXPLORATION - SKYCRANE HELICOPTER GOES TO MARS

Karee McAndrew, Freehold, NJ and Samantha Vancel, Tempe, AZ

Grades 3-8

Our session will focus on 2011-2012 Mars Science Laboratory mission. It will include an overview of previous NASA Mars missions, the current technology used to create the Mars Science Laboratory, and state-of-the-art landing techniques using a "sky-crane" maneuver. Groups will create their own sky-crane that they will use to safely land their Rover on our Mars surface.

SAVE THAT SPECIES

Bret Mahoney, Drew Smith and Alex Mattison, Science Museum Oklahoma

Grades 3-8

Save That Species is part game show, part live theater, and all academic exercise. Join the educators of Science Museum Oklahoma as participants turn into contestants and compete using their knowledge of physics, chemistry, and more to answer hypothetical challenges.

SOLAR DYNAMICS OBSERVATORY LESSONS

(New Session)

Robin Kennedy Kiel, Waterville Jr. High School and Catherine Tsairides, MTN Enterprises, LLC

Grade 3-8

The Solar Dynamics Observatory, launched last February, is the first mission to be launched for NASA's Living With a Star (LWS) Program. Participants will receive activity guides and do many of the solar activities designed to help students understand the mission and the science. Teachers will get the up to date pictures and video's of the mission and have the opportunity to ask questions of the scientists working on the mission. Teachers will be given a background CD.

TIGER TEAM SIMULATION: WHEN THINGS GO WRONG. . .

Reed Steele and Robert Hower, Challenger Learning Center Ohio

Grades 6-12

Step up to the plate as a member of the "Tiger Team" to solve unexpected problems that arise during a space mission. Using knowledge gained through hands on investigations, the "Tiger Team" seeks to find the solution to the heat shield problem that had faced the crew of STS-114. Participants will devise solutions and instruct the shuttle crew as to the implementation of the solution. A CD of lesson plans will be distributed.

THE AIR WE BREATHE

Lisa Brown, Aerospace Educations Services Project, JSC, Lester Morales, Aerospace Educaiton Services Project, KSC

Grades:: K-2

Join us as we incorporate science and literature using NASA's The Air We Breathe. This book is designed to help students enrich their science vocabulary, better understand Earth's atmosphere and practice the scientific process. The book is a great vocabulary builder for English language learners.

WILL YOUR HOMETOWN BE AN OCEAN CITY?

Margaret Baguio, Texas Space Grant Consortium, Margaret "Peggy" Eddy, Stovall Academy and Angaleta Crenshaw, Sunray High School

Grades 3-8

If the climate continues to change, will your city be underwater or become an ocean beachfront property? NASA missions help us study our home planet by viewing Earth from space. Increase your understanding of solid earth, ocean circulation and water stored above and below ground.



Session Selection: 12:45PM-2:15PM

IMAGINE ROCKETS

Chris Welborn and Nora Rankin, CSC Toys, LLC

Grades 6-8

Come join us for a class using rockets to explore the concepts of mass, inertia, stability, gravity, laws of motion, and chemistry. Make and use a variety of small rockets to demonstrate these principles. Have fun and learn too. Each attendee will make several simple low powered rockets to take home.

MICROGRAVITY, DEMONSTRATIONS, STEM, AND YOUR CLASSROOM

Richard DeLombard, Mr. Microgravity and Dennis Stocker, NASA Glenn Research Center

Grades 6-12

Hold microgravity in your hands! Play with it; investigate it. Learn how your students can do the same. Test your knowledge to see if you can find the reasons behind microgravity. Take some home with you to amaze friends, family, and students. NASA student competitions will also be described.

NASA AND YOU - PUT SOME BUOYANCY IN YOUR CLASSROOM

Becky Jaramillo and Marile Colon-Robles, NASA Langley

Grades 3-8

Use NASA engineering challenges to engage today's students! Put Newton's Laws and Bernoulli's Principal to work to maneuver a helium satellite through an obstacle course. Inspire bilingual students with NASA y Tu (NASA and You) featuring NASA's Hispanic community to explain the "How" behind the "Wow" of NASA technologies.

PAPER SPACE MODEL

Gary Kitmacher, NASA and University of Houston

Grades 3-12

Paper cut out, fold and glue together scale models and globes are inexpensive, in many cases free, widely available through internet download and by local printing, and can provide hours of educational fun while providing students with 3 dimensional hands-on manipulable products for use in lessons.

PODCASTING IN YOUR CLASSROOM

Suzanne Foxworth, Solar System Educator and Michael Myers, Liftoff & SEEC Alumni

Grades K-12

This session will be hands on with participants creating mp3's and mp4's. Participants will gain knowledge of audio and video casting for their

classrooms, and will receive the tools to be successful. Although, this will be a beginners level course these tools can easily be used to create impressive projects.

RACING TO SPACE: PUSHING THE ENVELOPE

Deborah Katvala and Jennifer Crepeau, Challenger Learning Center New Mexico

Grades K-8

Come join us for an exciting hands-on session investigating the similarities between race cars and aerospace beginning in the early 20th century to present day. You will experience a variety of cross curricular activities including Newton's laws and team building.

ROCKET REVOLUTION

Becky Kamas, NASA Johnson Space Center

Grades K-12

At NASA, it really is rocket science! Join NASA's Teaching From Space office as we present the new Rocketry Web site and opportunities and resources available to K-12 educators and students. Educators will also participate in hands-on rocketry activities they can take back to implement in the classroom.

TEACHERS IN SPACE: YOUR CHANCE TO GO!

Edward Wright, Project Manager: Teachers in Space and Colleen Howard, Education Coordinator: Teachers in Space

Grades K-12

Teachers in Space is a non-profit program working with the companies that are now developing reusable suborbital spacecraft. We want to put 1000 astronaut teachers in American schools within the next 10 years ~ we want you to be one of them!

ULTRA VIOLET RAYS/CREATING A SPACE SUIT

Marilyn Ortiz, Webb Elementary School

Grades 3-5

Participants will explore ultraviolet light-What effects it has upon us on Earth and in Space. They will use UV beads and sunscreen to determine the best SPF level and create a mini space suit to illustrate different layers of protection from the sun and other hazards in space exploration.

Organize Your Sessions!

Use this page to help you organize your sessions. Then go online to make your selections.

Thursday, 10:00-11:30

- A Walking Tour Of The Solar System (New Session)
- A Vacation in Space
- Aerospace Connections in Education: Be and ACE Teacher
- Antenna and Tracking Development Lab/Human Space Factors Lab
- EarthKAM: Taking Pictures of the Earth from Space
- Expedition Earth and Beyond: Using Earth for Planetary Comparisons
- Habitability Design Center Tour
- Make Space Day Everyday!
- Marketing the Moon
- Mass vs. Weight: A Heavy Duty Concept
- Mission Control Tour
- Modeling Motion of Electrically Charged Particle in Magnetic Field
- Navigation on/over the Earth using Magnetic Compasses and Maps.
- Neutral Buoyancy Lab Tour
- Newton's Law—NASA Style
- Robotics Lab/Lunar Lab Tour
- SCIENTIFIC SHOWDOWNS: Featuring Sudoku and Jenga Science Challenge
- Space is Alive Even When You're Five
- Space Vehicle Mock-Up Facility Tour
- Stories from Space! Human Spaceflight Knowledge and COOL Lessons for your Classroom

Thursday 12:45-2:15

- A Dog, A Child, & the Universe (New Session)
- Aircraft Operations Tour—Double Session
- Astounding Astronomy: Uncovering the Invisible Universe
- Antenna and Tracking Development Lab/Human Space Factors Lab
- Colonizing Mars: The Physics Behind Building a New Home
- Explore Jupiter's Family Secrets
- Exploring on the Moon
- Food Lab/Systems Engineering Tour
- Habitability Design Center Tour
- ISS Simulation (Dive Session)—Double Session
- KISSing Space: Mission L.A.U.N.C.H (cancelled)
- Lunar Sample Disk Certification—Double Session
- Mission Control Tour
- Mobile Air-Powered Recovery System (M.A.R.S)
- NASA's Do-it Yourself Podcast
- Neutral Buoyancy Lab Tour
- Orange-Salami in Space (New Session)
- Out of the Classroom; Into the Sky! Civil Air Patrol's Teacher Orientation Program (TOP) Flight—Double Session
- Reaching for the Future
- Remote Robotics Missions for your Students—Sensing and Control Across Space
- Robotics Lab/Lunar Lab Tour
- Space Vehicle Mock-Up Facility Tour
- Unlocking the Mysteries: NASA's Discovery Missions Deliver Solar System Science
- Weight Watchers (New Session)

Thursday, 2:45-4:15

- A Walking Tour Of The Solar System (New Session)
- Aircraft Operations Tour—Continued
- Antenna and Tracking Development Lab/Human Space Factors Lab
- Food Lab/Systems Engineering Tour
- Habitability Design Center Tour
- ISS Simulation (Dive Session)—Double Session
- It's A Small World After All: Nanotechnology and Space
- Light and Color
- Lunar Sample Disk Certification—Continued
- Mars Here We Come!
- Mission Control Tour
- MoonKam: Exploring Lunar Images
- NASA Earth Explorers: Studying Earth Through the Eyes of Satellites
- NASA Needs Engineers
- NASA Robotics and You!
- Neutral Buoyancy Lab Tour
- Out of the Classroom; Into the Sky! Civil Air Patrol's Teacher Orientation Program (TOP) Flight—Continued
- Robotics Lab/Lunar Lab Tour
- Soar to the Station and the Next Generation
- Space Physiology: A Flight Surgeon's Tale
- Space Vehicle Mock-Up Facility Tour
- Tiny Bubbles: The Scuba Connection
- To Infinity and Beyond: The Journey for a Model Rocket
- Using Dramatic Play to Understand Life in Space

Friday 10:00-11:30

- Astronomy in the Classroom
- Antenna and Tracking Development Lab/Human Space Factors Lab
- Awesome Astronaut Demos that Guarantee Student Understanding
- Beyond UFOs: The Search for Extraterrestrial Life (New Session)
- Bring the Universe to Your Classroom
- Eleven Essential Experiments for Enlightened Education
- Exploring Mobile Devices for Space Related Learning
- Exploring the Year of the Solar System
- Gadgets, Gizmos and Contraptions—Build on the Moon
- Gravity: The Invisible Force
- Habitability Design Center Tour
- Houston, We Have a Solution!
- Mission Control Tour
- Modeling Projectile Motion as an Attempt for Demystifying Rocket Science
- NASA Resources for Your Robot Invasion
- Neutral Buoyancy Lab Tour
- Robotics Lab/Lunar Lab Tour
- Space on a Shoestring
- Space Vehicle Mock-Up Facility Tour
- Web2.0 Makes Space Science go BAM!
- Zoom! Zoom! Satisfying the Insatiable Pre-K or Kindergarten Space Brain!

Organize Your Sessions!

Use this page to help you organize your sessions. Then go online to make your selections.

Friday 12:45-2:15

- A Walking Tour Of The Solar System (**New Session**)
- A Hands on Exploration of Fluid Dynamics
- Aircraft Operations Tour—**Double Session**
- Antenna and Tracking Development Lab/Human Space Factors Lab
- Astronaut Rescue
- Beyond our Solar System with NASA's Education Resources
- Butterflies, Spiders and Plants—Real Space Science in Your classroom
- Can I See You Now???
- Digital Storytelling
- Food Lab/Systems Engineering Tour
- From Near to Far: Bring SCH to your classroom
- Habitability Design Center Tour
- Hands –on Experiments that Allow Students to Feel Like Astronauts
- ISS Simulation (Dive Session)—**Double Session**
- LEGO WeDo Robotics– Ham's Space Adventure
- Lunar Sample Disk Certification—**Double Session**
- Mass vs. Weight: A Heavy Duty Concept—*repeat session*
- Mathematics in the Sky: Fly by Math and Line up to Math
- Mission Control Tour
- NASA's Problem Based Instructional Units
- Neutral Buoyancy Lab Tour
- Out of the Classroom; Into the Sky! Civil Air Patrol's Teacher Orientation Program (TOP) Flight—**Double Session**
- Robotics Lab/Lunar Lab Tour
- Scientists Write, Right?
- Space Education in Japan
- Space Vehicle Mock-Up Facility Tour
- Using Mystery and Mayhem to Ignite Enthusiasm in the Non Geek

Friday 2:45-4:15

- A Walking Tour Of The Solar System (**New Session**)
- Aircraft Operations Tour—**Continued**
- Antenna and Tracking Development Lab/Human Space Factors Lab
- Bernoulli Will Never Let You Down! (Building Foundation of Flight)
- Characteristics of Stars: Edible and Crafty Education
- Explore Ice Worlds
- Filtering Through Space
- Food Lab/Systems Engineering Tour
- Habitability Design Center Tour
- Investigating Flight
- ISS Simulation (Dive Session)—**Continued**
- Lunar Sample Disk Certification—**Continued**
- Mission Control Tour
- NASA Fit Explorer: Train Like an Astronaut
- Neutral Buoyancy Lab Tour
- Out of the Classroom; Into the Sky! Civil Air Patrol's Teacher Orientation Program (TOP) Flight—**Continued**
- Robotics Lab/Lunar Lab Tour
- Science Misconceptions in our class, Correct Them, Don't Teach Them
- Send your School to Space for a Week
- Space Vehicle Mock-Up Facility Tour
- The Universe in Your Classroom

Friday 2:45-4:15 (Continued)

- Using Astronaut Photographs to Discover the Spheres of Earth
- Using NASA Museum Exhibits to Teach the History of NASA's Human Spaceflight
- Weight Watchers (**New Session**) - *repeat session*
- What to Wear When You're Out There
- You Are Here: Sizing and Seeing our Invisible Universe

Saturday 8:00-9:30

- A Walking Tour Of The Solar System (**New Session**)
- A Thematic Approach to Mars Exploration
- An Introduction to NEON, the NASA Educators Online Network
- Asteroid Mysteries!
- Copernican Mathematics (Yes, There Was Math Involved)
- Exploration through LEGO NXT Robotics
- Field Trip to the Moon
- Inside Space Center Houston Tour
- It's Lunacy!
- Living on the ISS
- Kissing Space *repeat session (cancelled)*
- NASA's—A "Tail" of Two Comets Missions
- Out of the Classroom; Into the Sky! Civil Air Patrol's Teacher Orientation Program (TOP) Flight—**Double Session**
- Rocket Park Tour
- Small Bodies in the Solar System
- Star Challengers: *Moonbase Crisis*

Saturday 10:00-11:30

- A Dog, A Child, & the Universe (**New Session**)
- Folding Space: Geometry of Origami
- From Near to Far: Bring SCH to your classroom—*repeat session*
- Out of the Classroom; Into the Sky! Civil Air Patrol's Teacher Orientation Program (TOP) Flight—**Continued**
- Inside Space Center Houston Tour
- Kindernauts
- Mars Exploration: Skycrane Helicopter goes to Mars
- Rocket Park Tour
- Save That Species
- Solar Dynamics Observatory Lessons (**New Session**)
- Tiger Team Simulation: When Things Go Wrong....
- Will Your Hometown to an Ocean City?

Saturday 12:45-2:15

- A Walking Tour Of The Solar System (**New Session**)
- Imagine Rockets
- Inside Space Center Houston Tour
- Microgravity, Demonstrations, STEM and Your Classroom
- NASA and You: Put Some Buoyancy in Your Classroom
- Podcasting in Your Classroom
- Paper Scale Models
- Racing to Space: Pushing the Envelope
- Rocket Park Tour
- Rocket Revolution
- Teachers in Space: Your Chance to Go!
- Ultra Violet Rays/Creating a Space Suit

see



Space Exploration Educators Conference

DON'T MISS 2012 February 2nd-4th

All SEEC Session Proposals are due
September 1, 2011 Registration will
begin in mid October 2011

Contact us at 281-283-2149
or SEEC@spacecenter.org



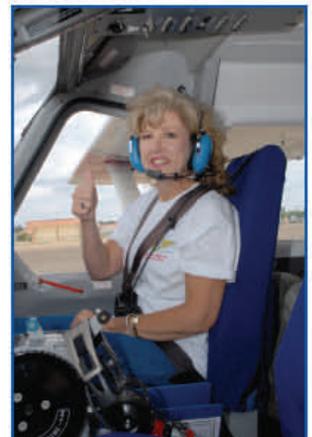
*Where Imagination
Takes Flight*

Civil Air Patrol Proud 2011 SEEC Supporting Partner

Civil Air Patrol was incorporated by the U.S. Congress in 1946 as a nonprofit, humanitarian organization *and* designated the official Auxiliary of the U.S. Air Force in 1948. Approximately 61,000 CAP volunteer members carry out the missions of CAP:

- Emergency Services (Search and Rescue; Disaster Relief; Homeland Security)
- Cadet Programs and Youth Development
- Nationwide promotion of Aerospace Education

Youth, ages 12-20, can join the Cadet Program to participate in aerospace career exploration, as well as character, leadership, and physical fitness development opportunities. K-12 educators and youth leaders can join as Aerospace Education Members (AEMs) to promote STEM subjects and careers to the young people of our country. **A special 1/2 price AEM offer for all SEEC participants is available for only \$17.50.** AEM benefits include over 25 **FREE** K-12 educational products aligned with National Academic Standards of Learning, as well as opportunities for awards, grants, professional development programs, *and* a Teacher Orientation Program (TOP) Flight in a CAP plane both at SEEC and in your hometown!



For more information, drop by the CAP Exhibit Booth! www.gocivilairpatrol.com