

*IGNITE YOUR IMAGINATION & LAUNCH YOUR SPIRIT*

*AT*

*THE 13TH ANNUAL*

# ***SPACE EXPLORATION EDUCATORS CONFERENCE***



*PRESENTED BY*  
**SPACE CENTER**  
**HOUSTON**

***FEBRUARY 8TH - 10TH, 2007***

## CONFERENCE HIGHLIGHTS

It is difficult to say what is impossible, for the dream of yesterday is the hope of today and the reality of tomorrow.

—Dr. Robert H. Goddard

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 13th Annual Space Exploration Educators Conference. You will go home recharged and ready to ignite the minds of your students!

- ☆ Top scientists, engineers and educators from across the United States, Canada, and Japan
- ☆ Exciting materials to inspire your students and enhance your classroom
- ☆ Hear from astronauts and engineers currently working on space exploration
- ☆ Mingle and network with fellow educators as well as NASA engineers and scientists at a reception

Enjoy a party on Friday night, where you will be served a banquet dinner and drinks, then party the night away with the astronaut band Max-Q.

## REGISTRATION INFORMATION

There are several methods for registering! You can register online at [www.spacecenter.org/seec.html](http://www.spacecenter.org/seec.html). You may also fax or phone in your registration information (and payment) with a credit card; or mail the registration form (p. 21-22) along with your check or money order to Space Center Houston. Registration will not be accepted without payment. Registration for SEEC is only \$229.

## 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 fellow colleague.

## SPONSORS AND PARTNERS



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## SCHEDULE OF EVENTS

### Thursday, February 8, 2007

- 10:00 Early Bird Check-in Begins
- 10:45 SEEC Newcomers Session (optional)
- 12:00—4:30 Early Bird Sessions Length Sessions (optional)
- 6:30—9:30 Welcome Reception (included)

### Friday, February 9, 2007

- 7:00—7:30 Check-in & Continental Breakfast (included)
- 7:30—7:45 Opening Addresses/Welcomes
- 7:45—10:00 Keynote Address—To Be Announced
- 10:30—11:45 Breakout Sessions
- 12:00—1:00 Lunch (included)
- 1:15—5:30 Breakout Sessions
- 7:15—12:00 Banquet/Dinner, Party to the Sounds of Max-Q (included)

### Saturday, February 10, 2007

- 7:30—8:00 Continental Breakfast (included)
- 8:00—9:00 Keynote Address—To Be Announced
- 9:15—12:00 Breakout Sessions
- 12:00—1:00 Lunch (included)
- 1:15—4:00 Breakout Sessions
- 4:15—5:00 Keynote Address—To Be Announced
- 5:00—5:30 Door Prizes/Departing Remarks

*Please check [www.spacecenter.org/seec.html](http://www.spacecenter.org/seec.html) for updates on speakers.*

*Due to the demands on astronauts,  
some speakers may be change at the last minute.*

## EDUCATOR RESOURCE CENTER MATERIALS

In order to receive materials from the Johnson Space Center Educator Resource Center, you will need to attend one of the four sessions being presented. These sessions are offered on Friday and Saturday. Please see the detailed sessions guide for more information.

## NASA TOURS

Several tours of NASA's Johnson Space Center are available to you throughout the conference. You may choose any of these as an option during one of the breakout session time slots. Many of the tours are offered more than once during the day. Please see the detailed sessions guide for more information.

## ***TRAVEL NOTES***

Space Center Houston is located midway 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 below.

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

The Center is usually cool, so bring a sweater. We also recommend comfortable attire since you will be actively participating in breakout sessions. Business attire is requested for the Friday evening banquet, but not required.

## ***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 in the hotel lobbies during the conference.

Hampton Inn & Suites	506 W. Bay Area Blvd, Webster (281) 332-7952
Extended Stay	720 W. Bay Area Blvd, Webster (281) 338-7711
La Quinta Inn & Suites	520 W. Bay Area Blvd, Webster (281) 554-5290
Hilton—NASA	3000 NASA Parkway, Houston (281) 333-9300
Brentwood Inn	1300 NASA Parkway, Houston (281) 333-2500
Microtel Inn & Suites	1620 NASA Parkway, Houston (281) 335-0800
Hampton Inn & Suites	3000 NASA Parkway, Seabrook (281) 532-9200
La Quinta Inn & Suites	3636 NASA Parkway, Seabrook (281) 326-7300

## ***CONFERENCE PRODUCTS***

The reception and banquet are included for registered attendees, however, if you would like to bring a guest you will need to purchase additional tickets. The tickets are available for \$25 for the reception and \$28 for the banquet. These tickets are on sale via the internet, registration form, or during the conference.

Space Center Houston will also have available curriculum products and conference apparel during the conference. More information, including 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***

### ***Closing Keynote***

The closing keynote address will begin at 4:15 on Saturday. Immediately following will be closing comments by Conference Staff and door prizes! You must be present to win...and prizes include Southwest Airline Tickets!

### ***Certificates***

Professional Development certificates will be available immediately following the closing keynote and 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.

## ***SELECTING YOUR SESSIONS***

Selecting your individual breakout sessions is easy! Just read through this conference booklet to see the selections for each time slot. Next, go online and make your session selections at [www.spacecenter.org/TeachersSEEC.html](http://www.spacecenter.org/TeachersSEEC.html). Sessions that are full will not appear. You can also use the session registration form in the back of this booklet. Choose three sessions you would like to attend during the time slot and mark them on the session election form, in order of your preference. Then, return the form to Space Center Houston. 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) 244-2149 or by email at [katieb@spacecenter.org](mailto:katieb@spacecenter.org).

## ***TOURS, SPECIAL & REOCCURING SESSIONS***

### **ADVANCED SPACE PROPULSION LABORATORY (TOUR)**

Come see rocket scientists at work! Johnson Space Center is developing a new engine for future exploration at the ASPL. Learn about the technology that may send the first human to Mars!

### **AIRCRAFT OPERATIONS (TOUR) (DOUBLE SESSION)**

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

### **ASTRONAUTS AND SPACE EXPLORATION**

What's it like to train to be an astronaut? What are the other job responsibilities? How do the new Constellation plans affect current astronauts? From selection to mission training, it's a very exciting life. Come experience a typical day in the life of an astronaut with one!

### **EDUCATOR RESOURCE CENTER (PRESENTATION)**

Visit this presentation to learn how to collect a multitude of exciting hands-on activities. No cost NASA resources, posters, lithographs, videos and much more are available to you.

### **FOOD LAB (TOUR)**

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.

### **ISS CONSTRUCTION SIMULATION (DIVE SESSION)**

Train like astronauts in this exciting session! You will participate in underwater training exercises using SCUBA gear. No previous experience necessary for beginners sessions, but you must be in good health and ready to get wet! Repeat session attendees or those with dive experience only in the Saturday session. Bring a swimsuit and towel. Participants must also attend one of the mandatory meetings prior to this session. \$20 charge for this event.

### **MISSION CONTROL (TOUR)**

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

## ***TOURS, SPECIAL & REOCCURING SESSIONS***

### **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 and your chance to see state-of-the-art training—the next best thing to space!

### **ROBOTICS LAB (TOUR)**

Space can be a dangerous place and there are corners that humans just can't reach. Come peak inside the robotics lab at Johnson Space Center and see what engineers have developed to aide the astronauts in construction and maintenance.

### **VEHICLE MOCK-UP TRAINING FACILITY (TOUR)**

View full-scale ISS and Shuttle mock-ups at the Johnson Space Center. This tour is a must if you have never been to this conference so you can see for yourself just where the action takes place!

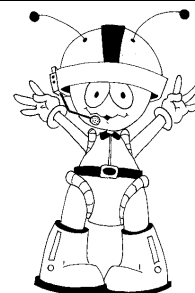
## ***NEW TO SEEC?***

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 on Thursday for a little SEEC 101!

When: Thursday, February 8, 10:45 AM

Where: Blast Off Theater

Presented by Brian Ewenson and Brian Jackson



## ***THURSDAY, 12:00-2:00***

### **COOKING UP QUESTIONS AND COMETS!**

*Kristy Schneider, La Center School District &*

*Laurie Cripe, Evergreen School District*

### **Grades 6-8**

Help your students successfully conduct their own open-ended inquiry investigations. Learn how to support and guide students in independent inquiry! You'll be able to ask investigable questions and cook up a comet by the end of this session.

## **THURSDAY, 12:00-2:00**

### **HANDS-ON LESSONS IN MATERIAL SCIENCE**

*Alan Gomez, Sun Prairie, Wisconsin Schools and NASA NEAT*

#### **Grades 9-12**

Scientists and engineers in materials science design new products to improve life everyday. This hands-on, standards based workshop will provide 5 different experiments in Metalurgy and alloys, ceramics, polymers, and composites. All materials are ready to implement.

### **HUMAN EXPLORATION OF SPACE: PAST, PRESENT AND FUTURE**

*Michael Lutomski, NASA's Johnson Space Center*

#### **Grades K-12**

America has again committed itself to exploring the stars. NASA's new vision will take us back to the Moon for the first time in 46 years. The difference this time is that humans will be there to stay. How will we learn these skills to live in space for an extended time? Come see how past exploration is setting the stage for the future.

### **IMAGINE MARS!**

*Jackie Allen, NASA's Johnson Space Center*

#### **Grades 6-8**

Blend science, community and the arts as you design Mars communities. Experience the *Imagine Mars!* Process as you learn about this free, accessible, flexible, and adaptable project. Leave prepared to implement.

### **LIFE ON THE EDGE: EXPLORING THE WORLD OF ASTROBIOLOGY**

*Stephen C. Wagner, SFA State University*

#### **Grades 3-5**

Welcome to Astrobiology! You will be introduced to simple, inquiry-based exercises that can expose your students to this subject and the search for life on Earth and other planets. Because Earth's most extreme environments reflect conditions found on other planets, we will focus on the bizarre "alien" life found in these places.

### **PLANET PARTY: A UNIT ON THE SOLAR SYSTEM**

*Marylss Jeffcoat & Roma Aggarwal, Fort Bend ISD*

#### **Grades 3-5**

Join us for a planet party! You will receive an entire unit designed on a daily outline format for teaching your students all about the solar system. Hands-on activities and extensions will be presented along with the basic unit.

## **THURSDAY, 12:00-2:00**

### **ROCKS FROM SPACE A.K.A. LUNAR AND METEORITE CERTIFICATION**

*Angelo A. Casaburri, Aersospace Education Services*

#### **Grades K-12**

Experience the geological approach to understanding the Moon. Learn the history of the Moon and the clues it provides scientists as they investigate the formation of the earth and Moon. Explore meteorites and how scientists use them to tell the story of the solar system. Become certified to borrow the lunar and meteorite samples. Educator Guides included.

### **SPACE STATION EXPLORATION**

*Patrick Buzzard, NASA's Johnson Space Center*

#### **Grades K-12**

Why are we building the International Space Station? What are the benefits to us on Earth? Meet a NASA expert and explore the International Space Station for yourself.

### **TO INFINITY AND BEYOND: THE JOURNEY OF A MODEL ROCKET**

*Brian Krauklis & Jon Maxwell, Katy ISD*

#### **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 Three Laws of Motion and demonstrate how NASA gets astronauts and their equipment into orbit. Model rockets are provided along with the fun!

## **THURSDAY, 2:30-4:30**

### **ATROMATERIALS AND COOL SPACE "STUFF"**

*Lunar Curator, NASA's Johnson Space Center*

#### **Grades K-12**

Ever wondered what NASA scientists are looking for as they study the rocks returned from the Apollo missions? What are the procedures for securing such a priceless specimen? Are Meteorites handled the same way? Come hear from the NASA scientists who answer these questions every day!

### **FIRST CONTACT: ALIEN GENETICS**

*Judy York, ESC Region 12 & Jeanine Wolf, Clyde ISD*

#### **Grades 6-12**

On a previous trip to a newly identified planet, the astronaut team of STM 109 made a fantastic discovery! Your mission is to examine the specimens and determine if any are similar to Earth life forms. Come be a part of this hands-on session and experience a little alien genetics!

### ***THURSDAY, 2:30-4:30***

#### **LIVING ON ORBIT: A STIMULATING SIMULATION**

*Camas Space Education Team, Liberty Middle School*

##### **Grades 3-8**

Imagine...on-orbit astronauts repairing a satellite's solar panel or conducting experiments in hydroponics...all in your classroom or gym. Learn how to develop a space station from a small, low budget simulation to a high tech, full day. Become a certified, flight-ready CAMAS astronaut.

#### **MARS SOIL SLUETHS: EARTH SOIL INVESTIGATIONS**

*Jackie Allen, NASA's Johnson Space Center*

##### **Grades 3-5**

Educators will experience activities that require students to use scientific lab skills as they experiment with Mars soil stimulant and other Earth soils. Full lessons and soil will be supplied to each participant.

#### **MOON MATH: CHALLENGING STUDENTS TO USE MEASUREMENT**

*Marcianna P. Delaney & Susan Hoban, UMBC*

##### **Grades 5-8**

Moon Math is an opportunity for students to do a project related to NASA's efforts to return to the Moon. Design and conduct an experiment on some aspect of the Moon by incorporating measurement. Moon Math utilizes technology so that students can participate in hands-on activities with NASA educators and scientists.

#### **NEW HORIZON AND PLUTO**

*Pam Osecky, Magnolia School System & Cynthia Keeling, NASA IV&V*

##### **Grades K-4**

Come join us for NASA's first mission to the planetoid Pluto. Understand the world at the end of our solar system. Hands-on activities and materials will excite your day.

#### **ROCKS FROM SPACE A.K.A. LUNAR AND METEORITE CERTIFICATION**

*Angelo A. Casaburri, Aersospace Education Services*

##### **Grades K-12**

Experience the geological approach to understanding the Moon. Learn the history of the Moon and the clues it provides scientists as they investigate the formation of the earth and Moon. Explore meteorites and how scientists use them to tell the story of the solar system. Become certified to borrow the lunar and meteorite samples. Educator Guides included.

### ***THURSDAY, 2:30-4:30***

#### **ROCKETS: TO THE MOON AND BEYOND**

*Christy Garvin, Cobb County Schools*

##### **Grades 6-8**

Explore the rockets that will be taking man to the moon and beyond. Learn the basic principles of rocketry and build one and two-stage rockets to teach chemical reactions, Newton's Laws, and problem solving.

#### **STS-118 Mission and Education Plan Overview**

*Jonathan Neubauer & Matthew Keil, Teaching From Space, JSC*

##### **Grades K-12**

Session participants will be provided with an overview of STS-118 mission objectives as well as learn the education plan for engaging students. Participants will be engaged in a hands-on engineering design challenge activity similar to the activities being planned for this exciting mission.

### ***FRIDAY, 10:30-11:45***

#### **A HANDS-ON EXPLORATION OF FLUID DYNAMICS**

*Loren Lykins & Charla Jordan, Carlisle ISD*

##### **Grades 9-12**

Fluid dynamics!! Good demos, great lands, 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 all with websites for extensions.

#### **ENGINEERING YOUR WAY TO THE MOON, MARS AND BEYOND**

*Jennifer Becerra & Lisa Ogle, NASA's Johnson Space Center*

##### **Grades 3-12**

Embark your students on a trip to the Moon, mars and beyond. Educators will learn about NASA's Constellation project, which will perhaps take your tudents out of lower Earth orbit and into the explorations of space. Engineer your own spacecraft using easy to find materials.

#### **EXTREME SOLAR SYSTEM: CRATERS, ICE AND VOLCANOES**

*Ruth Ruud, Retired Educator & Dan Malerbo, Carnegie Science Center*

##### **Grades K-5**

Participants will take a trip through the solar system exploring ice, craters and volcanoes through hands-on activities. Receive suggestions for integration of space science with language arts, math and writing assessment.

**FRIDAY, 10:30-11:45**

**FREE FAILING**

*Naveen Cunha, NASA NEAT*

**Grades 6-8**

Learn how to make a free-fall simulator out of simple materials. Guide your students through inquiry-based units in the life and physical science utilizing the 5E model. Get your students thinking about how THEY can replicate experiments at home. It really is rocket science!

**FROM INNER SPACE TO OUTER SPACE**

*Dr. Sonia Rahmati Clayton & Barbara Tharp, NSBRI—Baylor College of Medicine*

**Grades 6-8**

The National Space Biomedical Research Institute funded by NASA has research on sleep, muscles, bone and nutrition with application for the Earth-bound. Experience inquiry-based activities from three units.

**LIFE IN A HOSTILE ENVIRONMENT**

*Camas Space Education Team, Liberty Middle School*

**Grades 3-8**

Get your students moving with exciting activities! Learn about the environment of space with four hands-on work stations that detail activities about living and working in space. Learn about Newton's Laws, vacuum and pressure and the protective gear astronauts wear to protect themselves in a hostile environment.

**MARS BOOT CAMP**

*Marcy Novak, Pleasant Lane School & Sr. Alma Messing, St. Albie's School*

**Grades 3-5**

Create an inquiry-based, intense basic training unit in your classroom for a mission to Mars. Discover how students work in crews to analyze real data, test their ideas, and search for evidence of life. A multi-resource unit of practical classroom investigations will be shared.

**MOON, MARS AND BEYOND: LET'S HAVE FUN**

*Christine Graham, Bryan ISD & Dee Mock, Region IV*

**Grades K-5**

Get ready for hands-on, real world science. Your students will be amazed as they learn about the Earth, Moon, and solar system. Have a blast as you march on the sun, experience human solar web, enjoy yummy lunar treats and many other stellar experiences.

**FRIDAY, 10:30-11:45**

**PROJECT X-35: HANDS-ON ROCKETRY!**

*Cherri H. Brinley & Karen Craig, St. Edward Catholic School*

**Grades 5-8**

The Nerd Herd is back to present Project X-35, a series of 9 make and take activities using principles of rocketry to reinforce the laws of physics. Instructions, CD and fun included!

**ROBOT RENDEZVOUS WITH THE RED PLANET**

*Cheryl Neal, OMNIPLEX Science Museum & Brent Griffin, Sasakwa Schools*

**Grades 6-8**

Rendezvous with the robotic rover of your choice to explore Martian geological sites. Experiment with designs and programming and explore to be the first to submit your finding to NASA. Learners will be provided with a CD full of experiments and resources for the classrooms.

**ROCKETRY FROM A ROCKET SCIENTIST**

*Kevin Mellet, NASA's Johnson Space Center*

**Grades K-12**

Learn about rocket design from the ones who do it! Begin with a brief history of rockets, looking at the different types and how they work. Then, it is time to talk about design. What is an engineer thinking about when making design choices and what is on the horizon for the future of rockets?

**WHAT TO WEAR WHEN YOU'RE OUT THERE**

*Heather Paul, NASA's Johnson Space Center*

**Grades K-12**

Except for the people on "Survivor", everyone wears clothes, especially when they live and work in space. Come see the latest spacesuit ideas coming off the NASA runway and learn how students can become fashion designers to the stars!

**FRIDAY, 1:15-2:30**

**"EGG"POLLO MISSION: A HANDS-ON JOURNEY TO THE RED PLANET**

*Terry Sue Fanning, Moore County Schools & Billy Hix, Motlow College*

**Grades 3-5**

Build a "rocket engine" and find out about nutrition and space food as our eggonauts move across the solar system. Learn about chemical reactions and contingency plans. Gain science knowledge as you experience three activities that can be used to enhance classroom instructions



**FRIDAY, 1:15-2:30**

### **FISH ASTRONAUT SELECTION**

*Kathleen Woodring & W. Doug Porter, NASA NEAT*

**Grades 6-8**

What does it take to be an astronaut? What if it's a Fish? Why do we need to send fish to space? Replicate two simple and exciting experiments performed on STS-96 and STS-107 in your own classroom. Build the apparatus needed to conduct the experiment. Lessons plans, projects and resources included.

### **FROM HOT AIR BALLOONS TO THE ISS: THE RACE TO SPACE**

*Lynne Hehr, Center for Math & Science Education &*

*John Hehr, University of Arkansas, Fulbright College*

**Grades 4-8**

With the creation and liftoff of the hot air balloon, humanity was launched into space exploration that now continues with the ISS and future Moon and Mars missions. Attend this session to make several different hot air balloons, explore the history of the Race to Space and receive a CD packed with materials.

### **MOON JOURNALS: A SYNTHESIS OF SCIENCE, ART AND WRITING**

*Camas Space Education Team, Liberty Middle School*

**Grades 3-8**

Writing! Art! Science! Meld these three together and you have a powerful "project—Moon Journals. Follow the cycle of the Moon, recording observations and thoughts...first like a scientist then like a writer. Come and explore with us through participatory activities.

### **MOON MADNESS**

*Leesa Hubbard, Wilson County Schools*

**Grades 6-8**

Moon Madness will provide a fun lunar overview. Cover different features of the Moon and leave with a booklet of activities which are ready to use. Create the instructional items and be ready for immediate implementation!

### **OUR ASTONISHING UNIVERSE**

*Pamela Whiffen, NASA*

**Grades 6-12**

Experience hands-on, inquiry based materials developed by NASA that explore cutting edge astronomy topics that are sure to captivate students. Incorporating creative problem solving approaches along with a blend of science and math, these activities will stir your students imagination and intellect.

**FRIDAY, 1:15-2:30**

### **RADIATION AND HUMAN SPACE FLIGHT**

*Brad McClain, Space Science Institute, Al Krause, Marshall Space Flight Center*

**Grades 9-12**

What is radiation and where does it come from? What are the concerns for astronauts in low-Earth-orbit versus travel outside of Earth's magnetosphere. Radiation exposure in space is a major challenge for human space flight. Join the producers of a new documentary and accompanying classroom activities, as well as a radiation researcher for this presentation. Session will include sneak peak at the film and activities. It will make you GLOW with excitement!

### **SET PHASERS TO FUN: STUNNING AEROSPACE GAMES**

*Kathy Curtin, Civil Air Patrol, Kristy Curtin, Guthrie High School &*

*Kelly Wardlaw, New Horizons Fellow*

**Grades 3-5**

Introducing innovative ideas to ignite imaginations! Learn out of this world space games for the classroom. Develop ideas for building your learning community through an imaginative space carnival. Play games, receive hand-outs, construct a make-and-take, and brainstorm even more ideas.

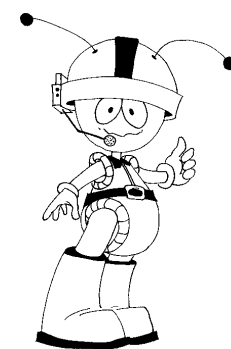
### **SPIN ME DIZZIER**

*Angela M. Krause, School District of the Menomonee Area &*

*Daniel J. Loewen, Fresno County Office of Education Court Schools*

**Grades 6-12**

Balance disorders affect more than 2 million Americans annually. Space-based research has provided doctors with a better understanding of how they occur and treatment. Simulate experiments conducted in space to gain a better understanding of the neuro-vestibular system. Receive resources and strategies.



### **THAT'S ENGINEERING**

*Sr. Alma Messing, St. Albie's School & Marcy Novak, Pleasant Lane School*

**Grades K-2**

Make a book do the work for you! Page by page, a space pop-up book will be created. Cutting and demonstration techniques will be taught. Space pictures and items will be provided.



**FRIDAY, 2:45-4:00**

### **ASTROSTANDARDS**

*Norm Hopping, Mart ISD &  
Judy York, ESC Region 12*

#### **Grades 3-6**

Come examine our corner of the universe. Begin with a little team building and proceed toward the “space” standards. What does it take to travel in space? Who are the members of our solar system? How do all these objects stay in space? And what is so special about the third planet?

### **EXPLORATION CELL SCIENCE**

*Dr. Neal Pellis, NASA's Johnson Space Center*

#### **Grades 6-12**

Cells are amazing little things! During this session we will explore cells inside and out. See how cells are different in space. Learn about current cell research and see how it benefits life here on Earth.

### **FAB 5 PART II: FANTASTIC ACTIVITIES BY 5 NEAT TEACHERS**

*Holly Mentillo, Sharon McDonald,  
Betty Bigney, Rachel Power & Diane Sartore, NASA NEAT*

#### **Grades K-5**

Learn 5 math, science and technology activities that use low or no cost materials, have minimum prep time and maximum excitement. Packets with all materials will be provided. All new activities (for those who attended last year).

### **HERE COMES THE SUN**

*Claire Damarodas & Lisa Wallingford, Saint Mary's Hall*

#### **Grades 3-5**

Get energized for teaching about the Sun! Heat up your classroom with cross curricular, hands-on activities and learn about NASA's new Mission, STEREO. Hand-outs, interesting activities, and information that's easy to use is provided.

### **INCREDIBLE EDIBLE SPACE EXPLORATION**

*Diane L. Watson, Webb Elementary &  
Renee Snell Merritt, Wicksburg HS*

#### **Grades K-8**

Come and eat your way into space and back while teaching space exploration concepts in a fun, hands-on way. Receive a packet of lesson plans to teach important space exploration concepts with related reading articles.

**FRIDAY, 2:45-4:00**

### **MARS ROVERS: GO FOR LANDING**

*Jeana Reagan & Margaret Freed, Boerne Middle School North*

#### **Grades 6-8**

Be a Mars robotics engineer! Using Legos Mindstorm kits and laptop computers, learn how to design, build and program a working rover to clear a landing site on Mars.

### **MISSION TO THE RED PLANET**

*Christina Pape, Sealy High School*

#### **Grades 6-12**

Send your students to Mars! Help them train for the mission, choose what spacecraft parts to use, construct rockets, and finally explore the surface by racing rovers across a simulated planet surface. See cooperative learning in action as students compromise to come in under budget and have great science returns.

### **MOON TIME**

*Gloria M. Ramos, Schertz Schools*

#### **Grades 3-5**

Focus on the Sun-Earth-moon relationship. Study the phases of the Moon and their effect on the Earth. Work on PR model and conduct activities to learn about the Earth and the Moon. Plan a Moon Party for students to share their research projects with the school and their families.

### **MY NASA DATA**

*Laurissa Werhun, TDSB*

#### **Grades 9-12**

Want to incorporate real NASA data into your science classrooms? Utilize the MY NASA DATA website to download real satellite data. Lesson plans will be discussed and distributed and the use of the website demonstrated.

### **SPACE EDUCATION IN JAPAN**

*Japan Aerospace Exploration Agency (JAXA)*

#### **Grades K-12**

JAXA and experienced Japanese educators will present unique teaching methods developed for classrooms in Japan. Establish new networks and discuss future collaboration. This session is perfect for educators wishing to foster international relations.

## **FRIDAY, 2:45-4:00**

### **STARS AND CONSTELLATIONS 101**

*Brandon Gillette & Julie Miller, Olathe Public Schools*

#### **Grades 7-9**

Have you ever had a hard time finding constellations in the night sky? Have you ever wondering why we don't see the same stars night after night? Do you enjoy dancing? Come learn activities that can immediately be taken into the classroom. A fun way to enhance your overall astronomy curriculum!

### **THE AMATEUR RADIO: A TOOL IN SPACE EXPLORATION**

*Karen Washburn, Attica Central School District &*

*Fred Gephart, Amateur Radio Operator*

#### **Grades 2-12**

Your students can communicate with the ISS! Learn the process and procedure for communicating with astronauts and cosmonauts using the "Ham" Radio. You do not need to be a ham radio operator!

### **WHERE IN SPACE DO WE REALLY LIVE?**

*Kathy Mullane, Hudson, Ohio City Schools*

#### **Grades 6-8**

How would you find your way home from outer space? What is your Universe address? These are all questions that will need to be answered in the future as we begin to explore our Solar System and the Universe. This mini unit gives you all the background, websites, and lesson plans to implement right away.

## **FRIDAY, 4:15-5:30**

### **ADAPTING TO THE SPACE ENVIRONMENT: FAILURE IS NOT AN OPTION**

*Dr. Gary R. Coulter, Challenge Learning Center of Colorado*

#### **Grades 9-12**

Participants will be introduced to the concept of microgravity and how human's adapt to the microgravity environment of space flight. Each person will build vision shifting goggles as well as a microgravity drop frame to demonstrate these concepts. Educational materials included.

### **BRINGING MARS INTO YOUR MIDDLE SCHOOL CLASSROOM**

*Brian Jackson, Ralph McCall School & Brian Ewenson, Pima Air and Space*

#### **Grades 5-8**

This session will take attendees on a journey to Mars that crosses the middle school curriculum. Participants will see activities from all the core areas and walk away with ideas (and resources) to use in all classrooms.

## **FRIDAY, 4:15-5:30**

### **CCSI: CHICKS CHALLENGING SCIENCE INVESTIGATIONS**

*Adair Teller, Bellflower Unified School District &*

*Joan Blackman & Paula Garret, Solar System Ambassadors*

#### **Grades 6-8 (with special needs considerations)**

The Chicks Challenging Science Investigations will look at the criteria for recognizing life on other planets. Hands-on activities will encourage students to think about the characteristics of life and about the possibilities of looking for life on Mars and other planets.

### **DETECTIVES ON VACATION: A TRIP THROUGH THE GALAXY**

*Tanya Dockery, Ronica Albritton, Deana Ricciardi & Cheryl Gunderson,*

*Nolanville Elementary*

#### **Grades 3-5**

Calling all detectives! Learn more about the NASA Sci-Files program and view the materials. Participate in the investigation and take home everything you need to implement into your classroom.

### **FOOD FOR HUMAN SPACEFLIGHT**

*Angela A. Casaburri, Aerospace Education Services*

#### **Grades K-12**

Eating and drinking are favorite everyday activities on Earth. However, how food and beverages are packaged and eaten is greatly affected by the unique microgravity environment of space. Learn about food preparation and menu development for human space flight. Educator Guides included.

### **HOUSTON, WE HAVE A PROBLEM**

*Daniel A. Wray, Warsaw Community Schools & Allan Miler, Einstein Fellow*

#### **Grades 6-8**

This session will feature a trans-continental, problem-solving simulation. Assume the roles of space flight crews and mission controllers to solve simulated problems across great distances. Learn how to bring this into your classroom.

### **I WANT TO BE AN ASTRONAUT: ASTRONAUT TRAINING**

*Sandy Sanders, Headland Elementary &*

*Sandy Armstrong, Wiregrass Math & Science Consortium*

#### **Grades K-2**

Space food, weightless environment training, moon crater hopping...learn how to incorporate an astronaut training day as a culminating activity for your unit on space. Detailed hand-outs, book list, and websites included.

## ***FRIDAY, 4:15-5:30***

### **IMPLEMENTING AND SURVIVING SPACE WEEK**

*Wendy Story & Connie Bain, Educators*

#### **Grades K-5**

Bottle rockets, alien heads, stargazers and more. This session will provide you with the tools to plan, implement and survive a week for space fun. Receive a CD containing schedules, parent notes, brochure, and ideas for integrating science and technology in all curricular areas. Out of this world demos and activities provided.

### **KIDS TO SPACE**

*Lonnie Jones Schorer, ShareSpace &*

*Barbara Sprungman David, Space Data Resource & Information*

#### **Grades 3-8**

Explore “Kids to Space: A Space Traveler’s Guide”, an unique resource that is the first step in in education-oriented space awareness project. This session will demonstrate how teachers can build upon student questions and improve their understanding of scientific principles via hands-on activities.

### **MEET A NASA FLIGHT DIRECTOR**

*Joel Montelbano, NASA’s Johnson Space Center*

#### **Grades K-12**

Have you ever wondered what a day in the life of a NASA Flight Director is like? Be a part of the excitement with one! Discover the inner workings of Mission control and go through a typical day.

### **MESSENGER AND SENSING ENERGY**

*Cynthia Keeling, NASA IV&V & Susan Sebeck, Nolan Elementary, Killeen ISD*

#### **Grades K-5**

To hot in Texas? Stay cooler in the Shadows. Join us on a MESSENGER mission and meet Bear Shadow. Free materials and a copy of the book Bear Shadow.

## ***SATURDAY, 9:15-10:30***

### **A TRIP INTO THE FUTURE: MAKING MARS REAL**

*Bill Merrill, Challenger Learning Center of San Antonio &*

*Tracy Thomas, Krueger School of Applied Technology*

#### **Grades 6-8**

This hands-on experience will get you and your students excited about Mars! We will go through many activities that are inexpensive, standards-based, fun and exciting. Activity packets will be available.

## ***SATURDAY, 9:15-10:30***

### **EXPLORING THE MYSTERIES OF SATURN**

*Lynne Hehr, Center for Math & Science Education &*

*John Hehr, University of Arkansas, Fulbright College*

#### **Grades 5-8**

Explore the fascinating world of the Saturn system! Experience the beauty, richness, and insights that tie planetary exploration to literature, art, music, architecture, and science. Receive an educator’s guide with CD, presentation suggestions and other resources.

### **FLY ME TO THE SPACE STATION AND BEYOND**

*Susan Wainwright, Novi Community School District*

#### **Grades 5-8**

Hello and good-bye: activities to show launching and landing of space craft. Be involved in activities that teach force and motion. The materials are inexpensive. Teachers can use lessons to teach children how spaceships are launched and landed.

### **HOW DO I GET BOTTLED WATER ON MARS?**

*Mike McGlone & Lisa Ogle, JSC-AESP*

#### **Grades 6-12**

If there is water on Mars, will it be safe to drink? Reclaiming water is a current issue on the ISS and will be for future space exploration. Find out about NASA’s Engineering Design Challenges for students and have fun creating your own water filtration system.

### **IT’S LUNACY: COME EXPLORE THE MOON WITH US!**

*Diane L. Watson, Webb Elementary School &*

*Reneè Snell Meritt, Wicksburg High School*

#### **Grades 3-5**

Do you need a little “lunacy” in your classroom? Come join us as we explore the Moon together using crafts, bulletin boards, edible activities, children’s literature, and math activities. All will be done in a fun, hands-on way. Extensive hand-outs.

### **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.

## **SATURDAY, 9:15-10:30**

### **MAKE SPACE DAY EVERYDAY**

*Sharon Eggleston, Lockheed Martin & Diane Bowen, Brunswick Junior High*

#### **Grades K-8**

Space Day is an educational initiative that inspires young people to explore careers in mathematics, science, engineering and technology. Dedicated to the extraordinary achievements, benefits and opportunities in the exploration and use of space, Space Day offers a variety of educational programs to inspire the 21st century space explorers.

### **SOLAR PAINTING**

*Jeanie Driskill, Educator*

#### **Grades 3-5**

Create your own solar system with spray paint, paper plates, lids and your imagination. Create solar systems that can be displayed at school or at home in this exciting, hands-on session.

### **STAR POWER! DISCOVERING THE POWER OF SUNLIGHT**

*Stefanie Long, Messenger to Mercury Educator Fellow &*

*Cathy Williamson, SciPort Discovery Center*

#### **Grades 9-12**

Calling all high school math and science teachers...come explore science and math connections using curriculum from the MESSENGER to Mercury mission. Conduct experiments and enjoy a little hands-on fun.

### **TEACHING THE ELECTROMAGNETIC SPECTRUM**

*Sherre Boothman & Laura Bajza, Lehman High School, Hays ISD*

#### **Grades 6-12**

Come explore the most significant discoveries to date of many of NASA's great observatories. Use these discoveries to teach the electromagnetic spectrum. Experience how the beautiful images are produced and the decisions the Astronomers make in developing these images.

### **TIGER TEAM SIMULATION**

*Reed Steele & Julie Muffler, Challenger Learning Center of Lucas County*

#### **Grades 5-8**

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 of the properties of matter and transfer of energy, find the solution to the heat shield problem confronting STS-114. CD and lesson plans included.

## **SATURDAY, 10:45-12:00**

### **A SESSION INSIDE YOU: PRESENTATION BY A FLIGHT SURGEON**

*Dr. Rick Scheuring, NASA's Johnson Space Center*

#### **Grades K-12**

How does the human body behave in the space environment? A NASA flight surgeon will cover the typical problems faced by astronauts and some of the obstacles ahead of us for the Moon and Mars.

### **CELEBRATE SPACE: EASY AND INEXPENSIVE IDEAS**

*Diane L. Watson, Webb Elementary School &*

*Reneè Snell Meritt, Wicksburg High School*

#### **Grades K-6**

Learn motivational ways to incorporate space exploration into your classroom during the school year. Activities will include many holiday ideas. Extensive packet of instructions will be given to participants.

### **CSI ALIEN ENCOUNTER ON THE MOON**

*Margaret Baguio, Texas Space Grant &*

*Angaleta Crenshaw, Rebecca Moreland & Joyce Hill, Sunray High School*

#### **Grades 6-8**

What appears to be a murdered alien, oozing fluids, and mysterious finger prints...Enter the gritty world of CSI Alien Encounter. Armed with high-powered forensic techniques and razor-sharp wits, dive deep into the mysteries of outer space. Don't just watch the action, live it! Return with ready-to-implement labs and scenarios.

### **HOW TO DEMONSTRATE MICROGRAVITY IN YOUR CLASSROOM**

*Richard DeLombard, NASA Glenn Research Center*

#### **Grades 3-8**

Learn how to demonstrate the effects of microgravity in your classroom with equipment ranging from leaky water bottles to electronic drop towers. Devices will be available for session attendees to perform the demonstrations.

### **I SPIED ON THE MOON, GUESS WHAT I FOUND OUT?**

*Laurie Cripe, Evergreen School District &*

*Kristy Schneider, La Center School District*

#### **Grades 6-8**

Can you see the Moon during the daytime? Does it rise and set at the same time each day? How much shorter are our days in the winter than in the summer? Help you and your students draw your own conclusions as you collect, graph, and analyze data.

## ***SATURDAY, 10:45-12:00***

### **KINESTHETIC ASTRONOMY**

*Brad McClain, Space Science Institute*

#### **Grades 9-12**

Reconnect your students with the astronomical meaning of the day, year and seasons, while covering scale, and distance in the solar system and the galaxy, the apparent motions of the sun and other stars, and the seasonal appearance of the constellations of the zodiac.

### **MARS AS THE ABODE OF LIFE**

*Anupam Ojha & Dr. Sandy Wilkinson, Great Barr School (UK)*

#### **Grades 6-12**

Come explore our future on Mars. From unmanned to terraformation, can we create a viable second home for humanity? Class activities in physics, chemistry and computer models are demonstrated. Extensive hand-outs included.

### **MARTIAN MATH**

*Carrie L. Murray, Educator*

#### **Grades 3-5**

Are you looking for some out of this world math activities to use with your students? Then this session is for you! You will learn about easy to implement, aligned with the national standards, and easy to differentiate activities in this session.

### **SPACE JOURNALING**

*Suzanne Phillips, Belton ISD & Angie King, Robinson ISD*

#### **Grades 6-8**

“Captain! According on the crew’s log there was a strange sound and the ground seemed to shutter just before all power went down!” “Ok, let’s bring the book back to the ship and review the entries to look for clues.” Throw out those binders and folders and join us in a journaling adventure. Experience how your students can benefit from using journaling in the science classroom.

### **STAR TREK: PE FOR THE NEXT GENERATION**

*Kelly Wardlaw, Solar System Educator, Kathy Curtin, Civil Air Patrol & Kristy Curtin, Guthrie High School*

#### **Grades 6-8**

Our mission: to present fun team building activities for use in a physical education classroom setting or wherever physical activity and teamwork are needed. Be a participant and enjoy a sample lesson of aerospace themed team building initiatives. Receive sample lesson plans.

## ***SATURDAY, 10:45-12:00***

### **THE SKY’S THE LIMIT: SPACE CONCEPTS IN EARLY ELEMENTARY**

*Dawn Burbach & Rita Galloway, Harlingen CISD*

#### **Grades K-2**

This session will provide educators with a unit of space exploration and discovery. The presenters will share detailed lesson plans and participants will have the opportunity to complete several hands-on activities from the unit.

### **USING LEARNING STATIONS TO TEACH SPACE SCIENCE**

*Nancy Gealow & Tara Viningre, Spring ISD*

#### **Grades 3-5**

Come and experience hands-on space science stations! Participants will come away with ideas to make their own learning stations.

## ***SATURDAY, 1:15-2:30***

### **ASTROTOTS**

*Kristie Staas & Edith Hillman, Houston ISD*

#### **Grades K-5**

Updated! New Games! What is an Astrotot? An Astrotot is a primary-aged student interested in space exploration. Activities are created and/or taught in both English and Spanish by 4th and 5th graders in a center-based atmosphere. Session is hands-on and attendees will leave with a CD full of activities.

### **INTERNATIONAL SPACE STATION GAMESHOW**

*Carla Rosenberg, NASA Headquarters*

#### **Grades 6-8**

Teams of teachers armed with remote controls will beam in answers to questions about the International Space Station in a jeopardy style game. Teachers will win prizes and take away e-copies of the presentation. Test your skills and trigger finger on a cornucopia of ISS topics from basics to the latest and greatest.

### **LUNAR BASE CHALLENGE: A COOPERATIVE TEAM SIMULATION**

*David Maneth & Sarah Ketchum, Jardine Middle Magnet School*

#### **Grades 6-8**

Your team of four astronauts have been assigned to develop a self-sustaining and self-funding lunar colony in four years. Build basic life support, generate funds, explore for lunar materials and create tourist attractions. You must find a way to out build, out think, and out survive the other teams to win this Lunar Base Challenge.

## **SATURDAY, 1:15-2:30**

### **READING, WRITING AND RINGS**

*Cindy Cardwell & Lynne Hehr, Center for Math and Science Education*

#### **Grades K-4**

Participants will take a tour of Saturn, its rings and its many moons while discovering out of this world activities to integrate science and language arts skills. This session will highlight hands-on science and engineering activities which correlate with student reading, writing and research skills. Lots of materials and make-and-take samples will be provided.

### **RUDY, THE RED BLOOD CELL, GOES TO SPACE**

*Theresa Betori, St. Patrick of Heatherdowns*

#### **Grades 3-8**

Enjoy a presentation filled with experiments on the heart and the circulatory system both on Earth and in space. Presentation includes hands-on experiments and hand-outs to take back to your classroom.

### **SHOOT FOR THE STARS: EFFECTIVE SPACE EDUCATION OUTREACH**

*Kareen Borders & Cindy Knisely, Key Peninsula Middle School*

#### **Grades K-12**

Break the mold! Shoot for the stars as your school rises to a whole new level of excellence in your space exploration program. Leave with hand-outs and the experience of engaging in several of the outreach activities. Learn how to form strategic partnerships and use effective marketing.

### **SPACE EDUCATION IN JAPAN**

*Japan Aerospace Exploration Agency (JAXA)*

#### **Grades K-12**

JAXA and experience Japanese educators will present unique teaching methods developed for classrooms in Japan. Establish new networks and discuss future collaboration. This session is perfect for educators wishing to foster international relations.

### **STAR MAGNITUDE: A CLASSROOM MODEL**

*Julie Muffler & Reed Steele, Challenge Learning Center Of Lucas County*

#### **Grades K-5**

Astronauts are “star sailors”. When finding certain constellations in the night sky, you will usually look for the brightest star first. Explore how you and your students can navigate the night sky using star magnitude by creating models on a common, inexpensive toy. Entire lesson provided.

## **SATURDAY, 1:15-2:30**

### **THERE'S NO MCDONALDS ON THE ISS**

*Susan Wainwright, Novi Community School District*

#### **Grades 5-8**

What do astronauts eat on the ISS since Pizza Hut doesn't deliver? The evolution of space food from the Mercury flights to now has changed from food sticks to personal choices and M&M's. Learn how food has changed, how it is prepared and take home easy lessons that are ready-to-implement.

### **TO THE MOON AND MARS: THE ROCKET DESIGN CHALLENGE**

*Justin Bartel, & Brian Youngers, Kansas Cosmosphere and Space Center*

#### **Grades 6-8**

Think you have what it takes to design the vehicles needed to get astronauts into space? Come test your skills in a friendly competition with other amateur rocket scientists. Assemble your rockets and see how they stack up. Test your problem-solving, math and communication skills.

### **WHAT'S GRAVITY GOT TO DO WITH IT?**

*Terresa Greenleaf, Winnebago Public School*

#### **Grades 9-12**

Ever wondered how weightlessness affects cell structure? Come learn how to build a mini (and inexpensive) device to use in determining the effect of weightlessness on the reproduction and cell structure of E.coli bacteria.

## **SATURDAY, 2:45-4:00**

### **ELEMENTARY MOON EXPLORATION**

*Janice Kolowith, Davenport School of the Arts*

#### **Grades K-4**

Learn about the Apollo program, the rockets and spacecraft used, the exploration of the Moon, and facts about the Moon. Participate in hands-on activities infusing reading, math, social studies and science. Leave with specific and relevant plans, book titles, videos, and black line masters.

### **FLYING HIGH WITH NASA: AN INTRODUCTION TO AIRSPACE SYSTEMS**

*Joanne C. Letwinch, J.F. Tatem School & Darlene Black, Marlow Public Schools*

#### **Grades K-5**

Take-off with the science concepts of flight and learn about the first “A” (Aeronautics) in NASA. Discover how to engage your students in aeronautical science concepts. Language arts, reading, and technology are built-in to the program and provide integration of skills. Hands-on activities and hand-outs included.

## **SATURDAY, 2:45-4:00**

### **GOT SPACE? GET MARS!**

*Jennifer Makins, Educator*

#### **Grades 3-5**

Bring your imagination and experience the emotion of the final flight of the space shuttle. Work with a team of flight controllers to diagnose a problem at the lunar base, or be the first to set foot on Mars. This simulated mission is the pinnacle of an integrated rocketry curriculum that will be outlined for you.

### **INCORPORATING AEROSPACE EDUCATION IN THE CLASSROOM**

*Regina Hein, DeSoto ISD & James Hein, Civil Air Patrol*

#### **Grades 6-8**

This session will include lessons on ratio distance between the Earth and the Moon, including an exercise in measuring the altitude of an Alka-seltzer rocket. Information on free teacher resources will also be given. (Bring a graphing calculator if you have one.)

### **ROBOLAB LABVIEW PROGRAMMING BASICS**

*Stephanie Witherspoon & Robert Dodds, Alexander Hamilton MS*

#### **Grades 6-8**

This session will cover the basics of programming a robot using Robolab Labview software and the Robotics Educator software. Intended for beginners or the truly confused, there will be lots of opportunity for questions. You will be supplied with a pre-built robot and allowed time to try and solve a challenge.

### **SPACE EXPLORATION CAMP FOR KIDS**

*Cindy Cardwell, Center for Math & Science Education &*

*Cathy Jones, University of Arkansas*

#### **Grades 5-8**

Come learn about a model used to present an integrated, space exploration camp as a culminating activity for students. Hands-on, minds-on activities using inquiry, physical science, life science, mathematics and earth and space science will be featured. Get great ideas for family nights and the classroom too.

### **STAR LIGHT, STAR BRIGHT, WHERE ARE THE STARS I SEE TONIGHT?**

*Linda Krouse & Karen Massey, Noble Planetarium,*

*Fort Worth Museum of Science & History*

#### **Grades 3-12**

Come be a star in a choice of colors. Find out just where you fit in our universe. Learn how we consistently find that star we're looking for. Instructions and activity included.

## **SATURDAY, 2:45-4:00**

### **STAYING COOL AROUND MERCURY**

*Lollie Garay, Redd School, Karen Stocco, S. Houston HS &*

*Marti Dekker, Woodbridge Elementary*

#### **Grades 6-8**

What do goggles and gelatin have to do with spacecraft design? Come ready to scratch your brain and work with a team to develop solutions to design challenges. These lively, hands-on activities from the MESSENGER Mission to Mercury are guaranteed fun!

### **THE BIG DIPPER, THE MOON, COMETS AND YOU!**

*Janet A. Brock & Pam Osecky, Westwood Middle School*

#### **Grades 6-8**

Come connect with various astronomical bodies through the use of hands-on activities and a variety of literature selections. Free materials and food will be provided. Activities are useful for many grade levels and learning styles.

### **THE SPACE EXPERIENCE: DESIGNING A ROCKET & A SPACESUIT**

*Catherine Wright, Clark Middle School &*

*Janice Park, New Diana Middle School*

#### **Grades 6-8**

Examine multiple rocket designs, including making and testing a rocket. Compare and contrast the different designs. Train like an astronaut and experience the difficulties they encounter in the space environment.

### **TO BOLDLY GO: ADVERTISING FOR SPACE**

*Kristy Curtin, Guthrie High School, Kelly Wardlaw, Solar System Educator &*

*Kathy Curtin, Civil Air Patrol*

#### **Grades 9-12**

Learn how to excite students about space exploration by having them create an advertising campaign! This new and improved workshop will incorporate persuasive writing, debate skills, and advertising strategies. Lessons included.

### **TRASH CAN ROCKETRY**

*Toni Jameyfield, Robert T. Hill Middle School &*

*Christi Lesikar, Alex W. Spence Middle Learning Center*

#### **Grades 6-8**

Want to have a rocket program but money is tight? Get the basic design plans and materials list to create viable rockets using common household items. Perfect for the teacher wanting to build a rocket program at your school! Build a rocket and take home curriculum materials.



## REGISTRATION FORM & SESSION SELECT

Express registration is available online! Please visit the conference website at <http://www.spacecenter.org/TeachersSEEC.html> to register for the conference and sessions!

Please indicate your status:

☐ Not Currently Registered      ☐ Pre-registered      ☐ Presenter

Name: \_\_\_\_\_

School: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Work Phone: \_\_\_\_\_

Email: \_\_\_\_\_

What grade level(s) best describe your expertise? \_\_\_\_\_

IF YOU HAVE NOT PRE-REGISTERED WITH PAYMENT,  
PLEASE FILL OUT THE PAYMENT INFORMATION BELOW.

Please check the items you wish to purchase:

<input type="checkbox"/> Conference Registration	\$229	Qty. _____
<input type="checkbox"/> Dive Session, Friday	\$20	Qty. _____
<input type="checkbox"/> Dive Session, Saturday	\$20	Qty. _____
<input type="checkbox"/> Reception Ticket, for guest	\$25	Qty. _____
<input type="checkbox"/> Banquet Ticket, for guest	\$28	Qty. _____

Total: \_\_\_\_\_

Payment Method: ☐ Check      ☐ Credit Card

Please make checks payable to Space Center Houston. Check # \_\_\_\_\_

☐ Visa    ☐ MasterCard    ☐ Discover    ☐ American Express

Card # \_\_\_\_\_ Exp. \_\_\_\_\_

Name on card: \_\_\_\_\_

On the following pages, number your first, second, and third choice for each block of sessions. If you do not indicate alternate sessions and your first choice is full, we will assign you a session. All efforts are made to place you in one of your three preferences. You may also register for sessions online.

## REGISTRATION FORM & SESSION SELECT

Be sure to mark your 1st, 2nd and 3rd choice for each time slot!

### Thursday, 10:45-11:45 AM

☐ SEEC 101

### Thursday, 12:00-2:00 PM

☐ Aircraft Tour (DOUBLE)  
☐ Cooking up Questions & Comets  
☐ Hands-on Lessons in Materials  
☐ Human Exploration of Space  
☐ Imagine Mars  
☐ Life on the Edge  
☐ Planet Party  
☐ Rocks from Space  
☐ Space Station Exploration  
☐ To Infinity & Beyond

### Thursday, 2:30-4:30PM

☐ Astromaterials & Cool Space Stuff  
☐ First Contact  
☐ Living on Orbit  
☐ Mars Soil Slueths  
☐ Moon Math  
☐ New Horizon & Pluto  
☐ Rocks from Space  
☐ Rockets  
☐ STS-118

### Friday, 10:30-11:45

☐ A Hands-on Exploration of Fluid  
☐ ASPL Tour  
☐ Engineering Your Way  
☐ Extreme Solar System  
☐ Free Falling  
☐ Food Lab Tour  
☐ From Inner Space to Outer Space  
☐ JSC Educator Resource Center  
☐ Life in a Hostile Environment  
☐ Mars Boot Camp  
☐ Mission Control Tour  
☐ Moon, Mars and Beyond  
☐ Neutral Buoyancy Lab Tour  
☐ Project X35  
☐ Robot Rendezvous  
☐ Robotics Lab Tour  
☐ Rocketry from a Rocket Scientist  
☐ Vehicle Mock-up Tour  
☐ What to Wear

### Friday, 1:15-2:30 PM

☐ Aircraft Tour (DOUBLE)  
☐ ASPL Tour  
☐ "Egg"pollo Mission  
☐ Fish Astronaut Selection  
☐ Food Lab Tour  
☐ From Hot Air Balloons  
☐ JSC Educator Resource Center  
☐ ISS Construction (DOUBLE)  
☐ Mission Control Tour  
☐ Moon Journals  
☐ Moon Madness  
☐ Neutral Buoyancy Lab Tour  
☐ Our Astonishing Universe  
☐ Radiation & Human Spaceflight  
☐ Robotics Lab Tour  
☐ Set Phasers to Fun  
☐ Spin Me Dizzier  
☐ That's Engineering  
☐ Vehicle Mock-up Tour

### Friday, 2:45-4:00 PM

☐ ASPL Tour  
☐ Astrostandards  
☐ Exploration Cell Science  
☐ FAB 5 Part II  
☐ Food Lab Tour  
☐ Here Comes the Sun  
☐ Incredible Edible Space  
☐ Mars Rovers  
☐ Mission Control Tour  
☐ Mission to the Red Planet  
☐ Moon Time  
☐ My NASA Data  
☐ Neutral Buoyancy Lab Tour  
☐ Robotics Lab Tour  
☐ Space Education in Japan  
☐ Stars and Constellations 101  
☐ The Amateur Radio  
☐ Vehicle Mock-up Tour  
☐ Where in Space

Continued on next page...

## ***REGISTRATION FORM & SESSION SELECT***

### **Friday, 4:15-5:30 PM**

- ☐ Adapting to the Space Environment
- ☐ ASPL Tour
- ☐ Bringing Mars to Your Middle
- ☐ CCSI
- ☐ Detectives on Vacation
- ☐ Food for Human Spaceflight
- ☐ Food Lab Tour
- ☐ Houston, We Have a Problem
- ☐ I Want to Be an Astronaut
- ☐ Implementing and Surviving
- ☐ Kids to Space
- ☐ Meet a NASA Flight Director
- ☐ Messenger & Sensing Energy
- ☐ Mission Control Tour
- ☐ Neutral Buoyancy Lab Tour
- ☐ Robotics Lab Tour
- ☐ Vehicle Mock-up Tour

### **Saturday, 9:15-10:30**

- ☐ A Trip Into the Future
- ☐ Exploring the Mysteries
- ☐ Fly Me to the Space Station
- ☐ How Do I Get Bottled Water
- ☐ It's Lunacy
- ☐ JSC Educator Resource Center
- ☐ Kindernauts
- ☐ Make Space Day Everyday
- ☐ Mission Control Tour
- ☐ Solar Painting
- ☐ Star Power
- ☐ Teaching the Electromagnetic
- ☐ Tiger Team Simulation
- ☐ Vehicle Mock-up Tour

### **Saturday, 10:45-12:00**

- ☐ A Session Inside You
- ☐ Celebrate Space
- ☐ CSI Alien Encounter
- ☐ How to Demo Microgravity
- ☐ I Spied on the Moon
- ☐ JSC Educator Resource Center

### **Saturday, 10:45-12:00 (Continued)**

- ☐ Kinesthetic Astronomy
- ☐ Mars as the Abode of Life
- ☐ Martian Math
- ☐ Mission Control Tour
- ☐ Space Journaling
- ☐ Star Trek
- ☐ The Sky's the Limit
- ☐ Using Learning Stations
- ☐ Vehicle Mock-up Tour

### **Saturday 1:15-2:30**

- ☐ Astronauts & Space
- ☐ Astrotots
- ☐ ISS Construction (DOUBLE)
- ☐ ISS Gameshow
- ☐ Lunar Base Challenge
- ☐ Mission Control Tour
- ☐ Reading, Writing & Rings
- ☐ Rudy, the Red Blood Cell
- ☐ Shoot for the Stars
- ☐ Space Education in Japan
- ☐ Star Magnitude
- ☐ There's No McDonalds
- ☐ To the Moon and Mars
- ☐ Vehicle Mock-up Tour
- ☐ What's Gravity

### **Saturday 2:45-4:00**

- ☐ Elementary Moon Exploration
- ☐ Flying High with NASA
- ☐ Got Space? Get Mars.
- ☐ Incorporating Aerospace Ed
- ☐ Mission Control Tour
- ☐ Robolab Labview
- ☐ Space Exploration Camp for Kids
- ☐ Star Light, Star Bright
- ☐ Staying Cool Around Mercury
- ☐ The Big Dipper, Moon...
- ☐ The Space Experience
- ☐ To Boldly Go
- ☐ Trash Can Rocketry
- ☐ Vehicle Mock-up Tour

## ***FREQUENTLY ASKED QUESTIONS***

### **Do I need to attend all three days?**

We recommend you attend all three days because it is fun! However, Thursday pre-conference sessions are optional.

### **Is food provided?**

Yes. Breakfast and lunch on Friday and Saturday as well as a Reception on Thursday and a Banquet meal on Friday. The food for Thursday evening consists of hors' d'oeuvres and cocktail sandwiches. The event on Friday is a full buffet. Cocktails are included on Thursday and Friday evening.

### **Is transportation provided?**

Transportation to and from the airport is the responsibility of the attendee. Space Center Houston will provide transportation to and from conference hotels to Space Center Houston.

### **What if I have to cancel?**

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 fellow colleague.

### **What is the conference attire?**

For conference sessions, we recommend you dress comfortably. Temperature in each of the rooms can vary, so a sweater is recommended.

### **Can I bring my child to the conference or conference events?**

The SEEC is an adult only event. Children are not allowed in any of the conference sessions, at the Reception or the Banquet.

### **Can I bring a guest to the Reception and Banquet?**

Yes. Additional Reception and Banquet tickets can be purchased for \$25 and \$28 respectively. They can be purchased in advance or they can be purchased on the day of the event, but not at the door. There are no refunds for additional Reception and Banquet tickets.

## ***STILL HAVE QUESTIONS? DON'T WORRY!***

Please do not hesitate to contact the SEEC staff by calling 281-244-2149 or emailing [katieb@spacecenter.org](mailto:katieb@spacecenter.org).

Information is also available at [www.spacecenter.org/TeachersSEEC.html](http://www.spacecenter.org/TeachersSEEC.html).

***See you in February!***