4th Annual International Space Station Educators Conference

- Come touch the future and join an extraordinary group of educators at the Fourth Annual International Space Station Educators Conference on February 6 & 7, 1998.
- Collect a multitude of ways to use this cooperative world project to enliven your classroom with science, mathematics & technology.
- Meet and talk with the astronauts, scientists, technologists and engineers who are making the dream of ISS a reality.
- Engage in and collect hands-on and interactive activities that fellow educators have used to bring ISS to life for their students.
- Learn the importance of international cooperation in building ISS, and meet astronauts and engineers from the partner countries.
- Discover the wide range of careers that are needed to assemble and use ISS.
- Tour the actual full-scale Space Station Mock-up at Johnson Space Center!
- Have a BLAST networking with fellow educators!
- This opportunity to discover ISS is limited to the first 300 registrants, so tell a friend and then fill in the enclosed registration form and return it to Space Center Houston TODAY!
- Special prize for the school district that sends the most teachers - it was a close race last year!

SCHEDULE OF EVENTS

Friday, February 6, 1998

7:00-8:00 am	Registration/Continental Breakfast	
8:00-10:00 am	ISS Overview	Randy Brinkley, ISS Program Manager
	Research on ISS	Chuck Lloyd, Deputy Manager, ISS Payloads Office
	Teleconference with Russia	William Shepherd, Astronaut
10:15-11:15 am	Breakout Sessions	
11:15-12:15 pm	Lunch	
12:15-4:45 pm	Breakout Sessions	
4:45-5:30 pm	Keynote Speaker - Kevin Chilton, Astronaut	
7:00-7:30 pm	Cocktails	
7:30-8:30 pm	Dinner	
8:30-10:30 pm	Party Time	

Saturday, February 7, 1997

8:30-9:30 am	Invited Keynote Speaker - Mike Foale, Astronaut
9:45-11:15 am	Breakout Sessions
11:30-12:30 pm	Buffet Luncheon
12:45-3:30 pm	Breakout Sessions
3:45-4:45 pm	Keynote Session - Moving Towards ISS Assembly - STS 88 Crew
4:45-5:00 pm	Close/Door Prizes
5:00-7:00 pm	Free time to tour Space Center Houston and shop

CONFERENCE HIGHLIGHTS

Randy Brinkley, ISS Program Manager
Astronauts who will begin construction of ISS.
Astronauts & Cosmonauts who are working on Mir, and who are training for work on ISS.
Top scientists & educators from across the United States and Canada
Leading edge science center educators

Listen to riveting keynote sessions and get actively involved in breakout sessions.
Collect lots of exciting materials to inspire your students and enhance your classroom.
Relax and enjoy a party on Friday night, where you will be served a banquet and drinks with an international flavor. Then dance to the out-of-this-world sounds of “MAX q”, the astronaut band.

You must register by January 23, 1998 to be part of this exciting opportunity!
SO TELL YOUR FRIENDS AND SIGN UP NOW!!

SPONSORS AND PARTNERS
As host of the ISSEC, Space Center Houston Educational Programs would like to thank these sponsors and partners:

LOGOS:
Boeing, NASA, Space Center Houston, Southwest Airlines, Houston Chronicle

GENERAL INFORMATION

REGISTRATION:
Registration is on a first-come, first-served basis. To reserve your spot in the conference, fax or phone in your registration form and pay with a credit card; or mail the registration form along with your check or money order to Space Center Houston.

If you have already pre-registered and sent in your payment, simply make your session choices, check the pre-registered box under payment information, and return your form to Space Center Houston.

DEADLINE - JANUARY 23, 1998
FIRST-COME, FIRST-SERVED!

REGISTRATION FEES: The $95 fee covers educational materials from your breakout sessions, Friday breakfast and lunch, Friday evening banquet, Saturday lunch, plus tours and breakout sessions at Space Center Houston, NASA/Johnson Space Center, the Neutral Boyancy Lab, and the Boeing Lab.

HOUSING: Special discounts are being offered by area hotels. Space Center Houston is not responsible for arrangements. Please contact one of the following hotels to make a reservation:

Best Wester/NASA
(281) 338-6000
Days Inn/NASA, $39.95 single, $46.00 double - 2020 NASA Road 1, Houston, Texas 77058, (281)333-0308
Holiday Inn/NASA, $69.00 single or double - 1300 NASA Road 1, Houston, Texas 77058, (281)333-2500
Homewood Suites
(281) 486-7677
Nassau Bay Hilton, $79.00 single or double - 3000 NASA Road 1, Houston, Texas 77058, (281)333-9300
(Rates dependent upon availability)
Super 8 Motel, $45.00 single or double - 18103 Kings Row, Houston, Texas 77058,
(281)333-5385

When making your reservations, be sure to inform the hotel that you are a conference participant at Space Center Houston's International Space Station Educators Conference.

TRAVEL NOTES: Space Center Houston is located midway between downtown Houston and Galveston. Take I-45 and exit NASA Road 1. The Center is approximately three miles east of I-45. If flying in, use Hobby Airport. Be prepared for cool weather or rain. The Center is always cool, so bring a sweater; Comfortable attire is recommended since you will be actively participating in breakout sessions. Business attire is requested for the Friday evening banquet.

CANCELLATIONS: 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.
CONFIRMATIONS: Once your application has been processed, you will receive confirmation regarding your participation in the International Space Station Educators Conference, and a list of your confirmed breakout sessions.

SESSION DESCRIPTIONS

In order to aide in your selection of breakout sessions, we have organized the sessions into five categories: Elementary School, Middle School, High School, General, and Tours.

Elementary School

Researching ISS **Grades 4-8**
Robin Moore **Librarian**
What am I supposed to do with this? Guide students on a successful research trip through the library using various resources from books to the Internet. Receive up-to-date reviews of books, CD's and Internet sites related to space technology and the International Space Station.

The Payoff of a Payload **Grades 3-8**
Bob Boykin **Director of NASA Regional Teacher Resource Center**
A hands-on, minds-on approach using the basics of rocketry to deliver a specific payload to ISS. Participants will use materials available and brainstorm ways to achieve a set goal. Problem solving and group cooperation is a must!

A Dream Come True **Grades 3-5**
Billings, Chandler, Wood **Teachers**
Learn how HJM Elementary School started a Young Astronauts Club using a space shuttle, mission control, and a skylab as the center of learning. Conduct experiments in your space station on Earth and receive handouts and a workbook with experiments, lessons, and objectives.

Request Permission to Dock **Grades K-5**
Marcy Novak **Teacher**
Create an activity based spacestation lab atmosphere in your classroom which links curriculum with technology and multiple intelligence theory. Numerous hands-on/minds on activities will be shared. An activity booklet with teacher notes will be provided.

Designer Spacesuits **Grades 2-8**
Guard, Fryberger, Roberts, & Lock **Teachers**
Using materials available in most schools and at home, you will work in groups to construct a spacesuit to be used for the many EVA's needed for ISS assembly. Each participant will come away with a detailed packet of instructions and the experience of working as a member of a crew to become an expert in spacesuit construction.

Thinking Through Living In Space **Grades K-5**
Anita McPartland **Teacher**
Discover how to develop a unit that provided opportunities for your students to use problem solving and higher level thinking skills to solve logic problems, hands on experiments and cooperative learning activities related to living on the ISS.

What Do We Need On Board? **Grades 3-8**
F.J. Cutting **Starbase Coordinator**
A multi-disciplinary approach to designing, building, and inhabiting a space station module. Construct your own model and take back directions on how to implement the activity in the classroom.

Houston… We Have A Problem! **Grades 4-8**
F.J. Cutting **Starbase Coordinator**
A team of astronauts scheduled to begin construction of the first module of the ISS experience a malfunction of their computer while docking. Survival is the immediate problem. This hands-on problem solving lesson is designed to build teamwork and communication skills.

Technology, TEKS… and Space! **Grades 3-8**
Betty Gregurek & Terry Summers **Teachers**
A thematic simulation to colonize ISS and later Mars! TEKS requirements for technology applications and space exploration are integrated into an exciting journey of discovery and life in space.

Earth Observations **Grades 2-12**
Kim Willis **Principal Scientist, Lockheed Martin**
Learn about the latest information and plans for Earth observations from ISS. See the astronaut's perspective of the Earth from space by viewing slides of geologic, geographic, environmental, and meteorological importance.

How to Explore Earth From Space **Grades 4-12**
Mary Fae McKay **Technical Writer, NASA**
From school or at home - through the media of laser videodisc and the World Wide Web - students can view the Earth as the astronauts see it. Using the 300,000 available photos, young explorers can gain skills in spatial relations, mapping, and change measurement. They can exchange data collected near their homes and plan treks to nearly inaccessible locales.

Food for Space **Grades 4-8**
Angelo Casaburri **NASA**
Learn about food preparation and menu development for space flight and life on the International Space Station. Exciting hands-on activities dealing with food. Receive draft copies of the newly developed NASA curriculum guide - Food for Space.

Suited for Spacewalking **Grades 4-8**
Gregory Vogt **NASA**
Learn about the spacesuit design process with exciting hands-on activities suitable for science, mathematics, and technology education. You'll discover why spacesuits are such an important part of life on ISS. Receive copies of the newly revised NASA curriculum guide - Suited for Spacewalking.

A Day In Space Simulation **Grades 2-8**
Guard, Fryberger, Roberts **Teachers**
Experience a wide variety of preparatory and "on orbit" activities used in an eight week hands-on integrated space studies unit. The unit culminates with crews of six students spending an entire day in "space", connected to their teachers only through Mission Control. Learn how to empower your students with space knowledge and life long skills in interpersonal relations.

Life In a Hostile Environment **Grades K-8**
Guard, Fryberger,Roberts, & Lock **Teachers**
Take part in exciting experiments that will help show students the importance of a spacesuit in the hostile environment of space. The assembly of the International Space Station will call for several EVA's. Without spacesuits, assembly of ISS would be impossible.

Middle School

Food for Space **Grades 4-8**
Angelo Casaburri **NASA**
Learn about food preparation and menu development for space flight and life on the International Space Station. Exciting hands-on activities dealing with food. Receive draft copies of the newly developed NASA curriculum guide - Food for Space.

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A hands-on, minds-on approach using the basics of rocketry to deliver a specific payload to ISS. Participants will use materials available and brainstorm ways to achieve a set goal. Problem solving and group cooperation is a must!

Tracking the Space Station from Earth **Grades 7-12**
Chris DuPont **Envision**
Learn how to track the Space Station, Shuttle, and other orbiting satellites on the personal computers in your classroom. Participants will have their own computer workstation, where they will learn how to use the internet and satellite tracking programs to monitor the precise orbital position of any satellite in Earth orbit and display it on the screen. Create your own Mission Control in your classroom and then watch the night skies for the Shuttle, Mir, and ISS!

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Space Characteristics **Grades 6-12**
Kent Whitehead **Teacher**
What do weightlessness and vacuums have in common? Discover this and much more in this demonstrative session. Participants will witness a variety of science experiments and learn how to use them in your own classroom to demonstrate space characteristics.

SAREX (Space Amateur Radio Expermiment) **Grades 7-12**
Matt Bordelon **SAREX Principal Investigator**
Learn how to become involved in this exciting student-based program. Discover how to make contact with the Shuttle and Space Station via Ham Radio.

Researching ISS **Grades 4-8**
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Start Your Own Space Program **Grades 6-8**
Krauklis, Straud, Hull **Teachers**
Do you want to challenge students in the areas of math, science, engineering, problem-solving, spacecraft and spacestation design? Join the Nottingham Aeronautics and Space Administration as we show you ideas that you can use to start your own space program.

Houston… We Have A Problem! **Grades 4-8**
F.J. Cutting **Starbase Coordinator**
A team of astronauts scheduled to begin construction of the first module of the ISS experience a malfunction of their computer while docking. Survival is the immediate problem. This hands-on problem solving lesson is designed to build teamwork and communication skills.

Space Odyssey **Grades 6-8**
La Haug, Schaeffer, Whipple **Teachers**
In collaboration, two schools from different districts/states explore the concept of space travel and life in an interdependent multicultural society by establishing effective communication while building a space station and creating the rules by which to live.

Technology, TEKS… and Space! **Grades 3-8**
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High School

X-38 **Grades 9-12**
Brian Anderson **NASA**
Find out all about the X-38, the escape vehicle for the ISS. This session will review the status of the program and of the current and upcoming events. The design philosophy and goals of the program will also be discussed.

SAREX (Space Amateur Radio Expermiment) **Grades 7-12**
Matt Bordelon **SAREX Principal Investigator**
Learn how to become involved in this exciting student-based program. Discover how to make contact with the Shuttle and Space Station via Ham Radio.

ISS Space Environment **Grades 9-12**
Dr. R. Suggs & Dr. J. Theal **NASA**
Discover how the design and operation of ISS is affected by elements of the space environment such as radiation, meteoroids, and orbital debris, ionospheric plasma, atmospheric drag, and spacecraft generated contamination.

Basic Science in the Classroom **Grades 9-12**
Bjarni Tryggvason **Canadian Astronaut, STS 85**
That fellow Newton was a pretty smart man! The basic principles he developed have formed the basis for almost all of our science for the past 300 years. Come look at these principles afresh by exploring the concepts of mass, weight, gravitation and Newton's laws using comparisons between space and terrestrial effects. Learn new ways to teach old principles!

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Surfing EVA **Grades 7-12**
Phil West **NASA**
In the harsh environment of space, proper clothes are needed to get the job done. This session will focus on the spacesuit that will be worn to assemble and maintain ISS. As with any job, the right clothes don't do much without the right tools, so the tools needed during EVA's will also be discussed.

General Sessions

International ISS Partners **Grades K-12**
Internation Partners Office **NASA**
Find out about the International Space Station International Partners and their contributions to this exciting project.

Finding Your Way Through Space **Grades K-12**
Laura DuPont
Using your own computer workstation, learn how to find your way around space and space station on the Internet. Get addresses for, and explore, the best educational space sites. Learn where you can find all sorts of fun, educational materials!

ISS Construction Simulation **Grades K-12**
Willis, Wendel **Teachers**
This double session will give you the opportunity to experience weightlessness first hand while using SCUBA gear in a local swimming pool. Train like the astronauts by participating in a construction activity as well as maneuvering through obstacles which simulate the shuttle's hatch. No previous SCUBA experience is necessary, but you must be in good health and ready to get wet! This session is limited to 40 participants, so register early and don't forget your swimsuit!

Russians In Space: Past, Present & Future **Grades K-12**
Andrew Petro, Engineer **NASA**
View scale models, photographs and illustrations of Russian spacecraft to gain an understanding of the history and accomplishments of Russians in space. Experience the importance of the current Mir Space Station and the future role of Russians in ISS.

Advanced Life Support Systems **Grades K-12**
Doug Ming **Space Scientist, NASA**
Learn the importance of plant growth research and the role of plants in advanced life support systems through discussion of a working laboratory being considered for the Plant Growth Unit on ISS. Also find out what it is like to be locked in a chamber for an extended period of time.

Boeing & ISS **Grades K-12**
Ginger Barnes **Boeing ISS Manager**
Discover Boeing's part in the ISS project. Find out what is happening behind the scenes in order to make the International Space Station a reality.

Tours

ISS Module Tour **Grades K-12**
Walk through the full-scale ISS mock-ups on-site at Johnson Space Center. This tour is a MUST if you have never been to this Conference so you can see for yourselves the components of ISS! If you have already seen it - go back and see what has changed!

JSC's Educators Resource Center **Grades K-12**
Discover the ERC's new location! Find out how to plan units, dub NASA videos, preview NASA videos, receive a wide variety of curricula for all grade levels/subjects and access outside resources to help support you in the classroom.

Neutral Buoyancy Lab Tour **Grades K-12**
Take a trip to the site where astronauts will practice their tasks and prepare for ISS missions. The new facility is the largest underwater space training facility in the world. This is your chance to see the state-of-the-art facilities which are used by astronauts from around the world to train for future ISS missions.

Boeing Lab Tour **Grades K-12**
Tour the flight Equipment Processing Laboratory where personnel test, clean, repair, package and ship astronaut equipment for use during each shuttle mission. The equipment includes spacesuits, launch/entry suits, crew communication items, cameras, tools, food, clothing and hygenic items.

MORE STUFF TO BLOW YOUR SOCKS OFF

10 percent discount at the SpaceTrader Gift Shop
Shuttle buses between Space Center Houston & ISS hotels
Information on Space Center Houston's Education Programs
Information on NASA Educator Resource Centers
Lots of things available for purchase, including: educational materials, ISS module videotapes, and handouts from all sessions
Lots of astronaut appearances - in breakout sessions, keynote talks, and the band!

KEYNOTE SPEAKERS

Randy Brinkley: Brinkley is NASA's Program Manager for ISS. He retired from the U.S. Marine Corps in 1990 where he was an officer and pilot. Brinkley was Mission Director for STS-61 for the Office of Space Flight and was responsible for the overall safe and successful execution of the Hubble Space Telescope Servicing Mission. He has Master's Degrees in Business Administration, International Relations and National Security and Strategic Studies.

Kevin Chilton: Chilton is an Astronaut, and a Distinguished Graduate of the USAF Academy. A veteran of three space flights, Chilton has logged over 704 hours in space. He was the Pilot on STS-49 and STS-59, and commanded STS-76 which was the third docking mission to the Russian space station Mir. He will be speaking about the assembly sequence of ISS as construction begins.

William Shepherd: Shepherd is an Astronaut and is currently scheduled to be the first U.S. astronaut to work aboard the ISS. He has flown on STS-27, STS-41, and STS-52. He is a graduate of the U.S. Naval Academy where is served with the Navy's Underwater Demolition Team ELEVEN, SEAL teams ONE and TWO and Special Boat Unit TWENTY. Shepherd is currently training in Russia, and will monitor a teleconference with cosmonauts and astronauts in Russia currently training for ISS missions.

REGISTRATION FORM

This registration form must be received by January 23, 1998

Name:
Address:
City:
State:

Zip:
Hm Phone:
Wk Phone:
Fax #:
e-mail address:
School/Organization:
School Address:
School District:
Region:
Please indicate what grade level(s) best describe your expertise:
Would you like to purchase extra banquet tickets at $20 per ticket?
Yes? How many?_____ (include payment below)

PAYMENT METHOD
❑Payment sent with pre-registration: ❑check ❑credit card ❑school check

Check or Money Order payable to Space Center Houston
Check # Driver's License #

If charging, check one:
❑Visa ❑MasterCard ❑Discover ❑Diners Club ❑American Express
Card # Exp. Date
Name as appears on card
Signature

EXPRESS REGISTRATION
Phone or fax your registration to:
Phone: (281)244-2149
Fax: (281) 283-7724

REGULAR REGISTRATION
Mail your registration to:
Space Center Houston - Education
1601 NASA Road 1
Houston, Texas 77058

SESSION PREFERENCES
Please number your first, second and third session preferences for each block of sessions. All efforts will be made to accommodate your preferences. Confirmations will note your session schedule.
Remember: Sessions filled on first-come, first-served basis!

FRIDAY, February 6
10:15 to 11:15
❑Researching ISS
❑A Dream Come True
❑X-38
❑Request Permission to Dock
❑Boeing Lab Tour
❑ISS Module Tour

❑ERC Tour

12:30 to 1:45
❑Earth Observations From ISS
❑Designer Spacesuits
❑International Partners
❑Thinking Thru Living In Space
❑ISS Module Tour
❑NBL Tour
❑ERC Tour
❑Boeing Lab Tour

2:00 to 3:15
❑How to Explore Earth From Space
❑What Do We Need On Board
❑Start Your Own Space Program
❑ISS Space Environment
❑ISS Module Tour
❑NBL Tour
❑ERC Tour
❑ISS Construction Simulation (Double Session)

3:30 to 4:45
❑Houston... We Have a Problem
❑Space Odyssey
❑Technology, TEKS...and Space
❑Finding Your Way Through Space
❑ISS Module Tour
❑ERC Tour

SATURDAY, February 7
9:45-11:15
❑Space Characteristics
❑Food For Space
❑A Day in Space Simulation
❑Suited for Spacewalking
❑ISS Module Tour
❑ERC Tour
❑Tracking ISS

12:45 to 2:00
❑Ham Radios

- ❑Life In A Hostile Environment
- ❑Surfing EVA
- ❑Basic Science In the Classroom
- ❑ISS Module Tour
- ❑ERC Tour

2:15-3:30

- ❑Advanced Life Support Systems
- ❑Boeing & ISS
- ❑The Payoff of a Payload
- ❑Russians In Space
- ❑ISS Module Tour
- ❑ERC Tour