

National Aeronautics and Space Administration



Roundup

Lyndon B. Johnson Space Center

February | 2010

Life on Earth



JSC Director



On the cover:

What all does Johnson Space Center do to make this the best workplace possible? Find out with the "Life on Earth" Program. Details on pages 6 and 7.



NASA/HARNETT jsc2009e284195

Photo of the month:

Fog cozies up to relics of the past on a winter day at Johnson Space Center.

As I'm sure you've heard, in real estate the three most important factors are "location, location, location." In the modern workplace, the three most important factors are "**communication, communication, communication.**" Specifically, I'd like share my thoughts on using today's communications tools effectively and safely and the importance of communicating with our co-workers.

The new "social media" enables us to communicate more quickly and easily with an almost unlimited number of people. Our challenge is to learn how to use these new tools safely and effectively so they add value to our mission and increase public awareness to the benefits of a robust space program. Our communications folks are working on several good ideas. I'm confident we'll have some innovative plans for more effective use of social media in the near future.

I want to remind everyone of the "gotchas" in our world of electronic communications. If you text it, e-mail it, Twitter it, blog it or otherwise put it in the electronic ether, you have to assume it can and possibly will go out to the whole world. I don't have to remind anyone of the steady stream of headlines, audio and video clips we see every day, from people who didn't think it would get out or didn't think at all. My point is to stop and think before you hit "send."

"Failure to communicate" is one of the human factors considered in mishaps and misunderstandings, so developing better communication skills should be a constant goal in our work and personal lives. While we are working this issue through our Inclusion & Innovation Council, Joint Leadership Team, Employee Leadership Team and Internal Communications Coordination Committee, good communication always starts and ends on an individual level. (By the way, those skills don't come naturally to me. They are something I'll be working on for the rest of my life. My wife, on the other hand, seems to be a naturally good communicator. After 40 years of marriage and a lot of patience on her part, I've come a long way, but I envy her communication skills.) Be it natural or learned, good communication skills are more important than ever in our workplace.

With the shuttle transition and discussion regarding the future of the space program and budget pressures, stress on our workforce is a real concern. It is imperative that we not be distracted from safely executing our missions. It will help to remember that we're all part of the NASA family and we need to watch out for each other. Having someone to talk to or vent to, if necessary, is important. Please find the time to talk and listen. We have many ways to help—we just need to know who might need it.



NASA PHOTODISK

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Moon and Mt. Everest rocks find a home in orbit

A moon rock collected during the historic Apollo 11 mission will find a new residence aboard the International Space Station, alongside a piece of Mt. Everest, next month.

On May 20, 2009, during his second attempt to reach the highest point on Earth's continental crust, former astronaut Scott Parazynski successfully carried the moon rock with him to the summit of Mt. Everest. Part of the Himalayan range in Asia, Mt. Everest is located on the border between Sagarmatha Zone, Nepal and Tibet, China—a perilous journey for Parazynski and his team.

Parazynski collected a rock from the summit of Mt. Everest to accompany the lunar sample on its journey back to space.

On Jan. 6, at Space Center Houston, Parazynski presented both rocks to STS-130 Commander George Zamka during a special ceremony. Zamka will deliver the rocks to the space station during Space Shuttle *Endeavour's* mission, where they will reside in the Tranquility module. The module is also being delivered to station by the crew.

Fittingly, the moon rock was originally collected by former astronaut Neil Armstrong from the Sea of Tranquility on the lunar surface more than four decades ago.

After being presented with the moon and Earth rock duo, Zamka

expressed the significance of the event.

"These rocks have already done more than a human being can do in a lifetime," Zamka said. "For 4 million years they were on the moon undisturbed. They got on a spaceship, traveled to Earth, went up to Mt. Everest. So in a way they have tremendous history, and now they're going to travel 17,500 mph back to space, where they will reside in the cupola of the Tranquility node."

Zamka said the rocks will be a reminder to the astronauts on the space station about "what human beings can do and what our challenges are. So this is a tremendous opportunity."

During the presentation, Parazynski gave a narration of his journey to the top of Mt. Everest. He explained that a part of his motivation to carry along the lunar sample was pride to have been "born in this great country of ours and growing up in the shadows of many heroes, such as John Glenn, Jacques Cousteau, Neil Armstrong and Buzz Aldrin," among others.

"These are the folks who I really looked up to as a kid," Parazynski said. "It's great to grow up in a country where you can walk in the paths of these types of people. One of the things I like to do is to honor them and pay tribute to them, and that is why I took a sample of the moon with me to Mt. Everest."

Former astronaut Scott Parazynski seized the opportunity to bring a piece of the moon to the top of Mt. Everest.



NASA/PHOTO JSC2010E006788



NASA/PHOTO

Getting greener

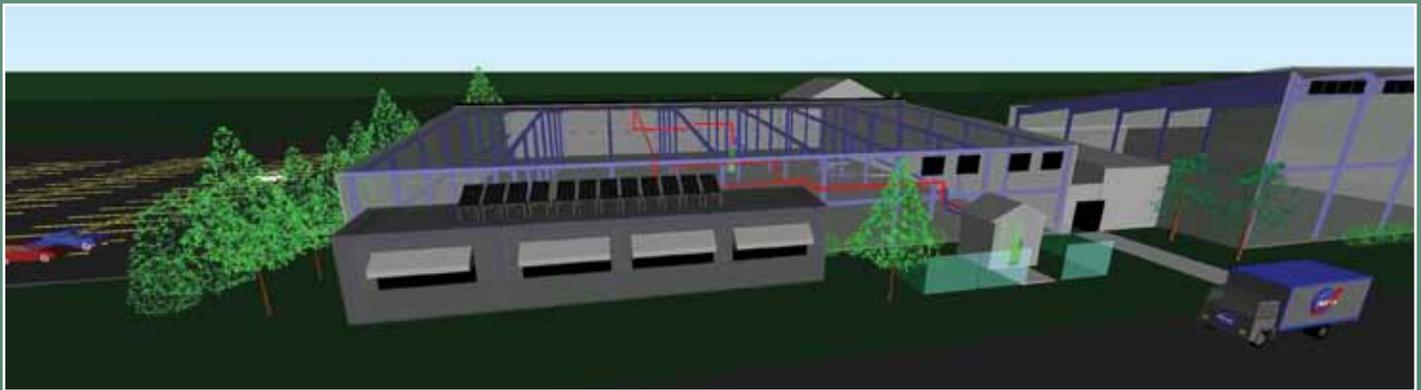
Solar hot water and daylight-harvesting system at the Gilruth Fitness Center

Johnson Space Center took another step in the direction of renewable energy usage by constructing a combination Solar Hot Water and Daylight Harvesting System for the Gilruth Fitness Center last summer.

The solar hot water system is designed to provide preheated water for the four 119-gallon electric water heaters used in the facility. Twelve solar collectors, mounted on the south-facing roof,

daylight harvesting has been demonstrated to save energy, reduce operating costs and increase the quality of the visual environment, all while improving user satisfaction. The system is estimated to conserve about 14,000 kilowatt-hours per year at the Gilruth Fitness Center.

In total, the entire renewable energy project will have a cost savings of around \$15,000 to \$20,000 each year.



MASA/PHOTO

A 3-D image of the Gilruth Center and its 12 solar panels and solar water piping run.

absorb sunlight and convert it to heat, which is then transferred to propylene glycol fluid in the collector's piping system.

Afterward, the environmentally friendly fluid is pumped through a closed-loop system to an in-line heat exchanger, which transfers the heat to three new 200-gallon hot water storage tanks. These tanks feed the existing four electric water heaters. This system is estimated to produce 50 to 70 percent of the hot water used at the Gilruth Fitness Center.

The renewable energy project also includes daylight harvesting for the Gilruth gym. Simply stated, daylight harvesting is the use of diffused natural daylight as a source of lighting for a space when the weather permits.

Skylights allow sunlight in to brighten an interior space. Unfortunately, these fixtures rely on the interior surfaces of buildings to reflect and ultimately diffuse that light. Although the use of this direct sunlight is good, it can be too bright or low depending upon the direction of the sun and time of year.

Daylight-harvesting systems differ from skylighting in that the diffusion of light is engineered so it occurs inside the fixture first and then inside the room. Used in this fashion, daylighting can provide very uniform interior illumination, similar to that of electric lighting.

The Gilruth system consists of 16 daylight-harvesting units that are connected to the existing lighting with controls. A photocell measures the natural light coming from the units. As the natural lighting levels increases, the electric lighting fixtures dim. When enough light is harvested, the controls turn off the electric fixtures, illuminating the gym solely with lighting from the sun. Effective



MASA/PHOTO JERALD ROWLANDS

The Gilruth gym is now equipped with daylighting fixtures that harvest natural light.

NASA marshals technology to help Haiti

NASA's considerable Earth-observing and data analysis and distribution capabilities were mobilized to provide information to support disaster recovery efforts in Haiti after the devastating Jan. 12 earthquake.

NASA's Earth Observing-1 satellite, with the Advanced Land Imager (ALI) instrument aboard, took an image centered on Port-au-Prince, Haiti, on Jan. 15. The picture on the left is the entire ALI image. The lower right image is a zoom-in of Port-au-Prince, while the upper right image is the same view taken in September 2008, one week after Hurricane Ike. Significant features can be seen in both zoom images. Hurricane Ike unleashed torrential rains that caused severe flooding as depicted (upper right image) in the excessive discharge of sediment at the river delta, just north of downtown Port-au-Prince. The pier in the center of the 2008 image collapsed during the earthquake and is not visible in the 2010 image (lower right image).



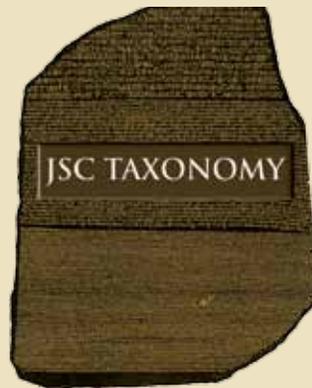
Building a solid foundation for **knowledge** management

For more than 50 years, Johnson Space Center's organizational culture has focused on accomplishing tasks within individual functional areas. As a result, groups have used numerous applications, databases and content repositories to meet their specific needs. These information silos are rich in historical data useful to new projects and programs. The growing need for access to this information necessitates building a solid foundation for users to easily locate JSC content.

Last summer, the Chief Knowledge Officer, in conjunction with the Information Resources Directorate (IRD), launched an initiative to enhance retrieval of JSC content. The foundation of this enhancement is known as the JSC Taxonomy. The taxonomy consists of preferred terms bound by relationships between those terms. This structure has been applied to JSC content and can be accessed with the JSC Google Search.

"Taxonomy facilitates the reusability and recovery of existing information and discovery of related information," said Sarah Berndt, JSC taxonomist. "The JSC Taxonomy adds structure to the center's most valuable asset: its community knowledge."

Each directorate, program, office and organization with data stored in repositories, shared drives and individual workstations will benefit from the addition of centerwide vocabulary to their content.



Existing JSC Taxonomy collaborators include subject matter experts (SMEs) from Space Life Sciences, IRD, Astromaterials, Exploration Sciences and more. These experts participate in building branches and sections of the JSC Taxonomy to accurately represent their content. SMEs exist at many levels within any group, and the JSC Taxonomy will grow with their participation.

"Organizations across the center are asked to contribute to the JSC Taxonomy by allowing their SMEs to assist in the identification of top functions and development of organizational vocabularies," said Chief Knowledge Officer Representative Larry Shaw.

Test out the taxonomy-enhanced JSC Search directly at <http://google.jsc.nasa.gov>, or enter a keyword/search phrase into the Google-powered search box on many JSC pages to experience the

enhanced features, including: a search ribbon to suggest related terms; added filters to narrow search results with a single click; related topics display; and an A-to-Z list search feature on categories to begin new searches.

If you are or know of an SME who would like to share community knowledge to benefit JSC, please contact:

- JSC Taxonomist Sarah Berndt at x3940 or sarah.berndt@nasa.gov
- Chief Knowledge Officer Representative Larry Shaw at x32173 or larry.c.shaw@nasa.gov

▶ Johnson Space Center proves

Yes, of course, there is life on Earth, but Johnson Space Center is also improving the quality of work life at the center with the Life on Earth Program.

What began through initial discussions between JSC Director Mike Coats and the Inclusion & Innovation (I&I) Council about the well-being of employees at the center spawned into an I&I Work Life Fit Engagement Team concept.

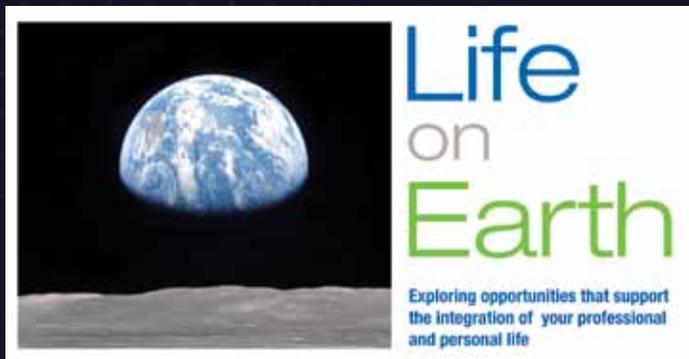
“One of the engagement teams looked at the work/life aspect here at JSC,” Life on Earth Program Manager Sylvia Stottlemeyer said. “They found we’re doing a great job of providing a lot of services and benefits to our employees, but they’re not showcased. Employees don’t know about them.”

Over the past several years, benefits such as telework, family and medical leave and flexible work schedules became standard business practices and are now commonly used across the JSC team. The

I&I Council, however, recognized that JSC team members, both civil servants and contractors, are not aware of the wide range of services and programs available. In response, the Human Resources Office brought these options together under the Life on Earth umbrella so workers could tailor offerings to fit their personal and professional lifestyle.

Life on Earth will showcase various programs and services through a printed brochure, which will be distributed to all JSC team members, as well as a Web site. Both products feature an elaborate menu of services that is arranged into categories that follow the Body-Mind-Spirit connection.

“We wanted a menu form, because that’s what the engagement team recommended, and we liked the idea,” Stottlemeyer said. “People can look on there and pick and choose. What suits me, what will serve me in my health and well-being and balancing my life?”



Sports are a small slice of the wellness, athletic and recreational activities available to JSC team members.

Employees can positively impact others by participating in any of the four blood drives per year.



There is 'Life on Earth'

On the menus, the "Climbing the Summit" section portrays the challenge to nourish ourselves, stay healthy and reduce stress. "Navigating the Seas," or "Prospecting in the Desert" for White Sands Test Facility employees, exemplifies our efforts to develop and nurture our intellectual and psychological well-being. "Reaching the Stars" depicts social aspects such as celebrating with our community, fellow team members, friends and families.

Life on Earth will routinely showcase existing services, assess recommendations for new ones and bring those ideas to responsible center organizations for review and possible implementation.

Even better, Life on Earth is a perfect fit for everybody at the center.

Knowing what is available is half the battle, and that is what the I&L Council and the Human Resources Office realize. When employees understand the various ways they can improve not only their work

lives but their personal lives, well-being and success are natural by-products.

"We want employees to be balanced and happy and healthy," Stottlemeyer said. "To achieve those goals, we want employees to take advantage of the numerous opportunities we offer here at JSC."

So just what does JSC offer, and where can one go for more information? You probably know some of the options already, but others may surprise you. Check out the Life on Earth menu and Web site regularly at <http://jscpeople.jsc.nasa.gov/LifeOnEarth>, which will always provide the most current information as additional services are introduced for employees. You owe it to yourself to make the best of your life here at JSC.

As Coats said, "By making the time to take care of ourselves, we will be more productive both at work and at home. We owe it to ourselves and our families."

Navigating the Seas



Reaching the Stars



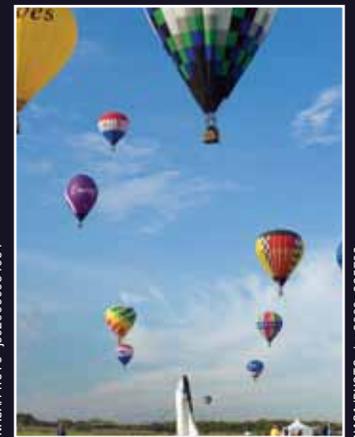
NASA/PHOTO jsc2010e008550

One flexibility, telework, is helpful when personal and professional schedules collide.



NASA/PHOTO jsc2009e084054

Connecting with JSC folks and their families and friends is easy. One such option is the annual JSC Picnic hosted by the Employee Activities Association.



NASA/PHOTO jsc2009e225702

JSC plays host each year to the Ballunar Liff Festival, which features hot air balloons galore, skydiving exhibitions, entertainment, exhibits and more.



Safety & Mission Assurance

campaigns to make a difference

By Neesha Hosein

The Safety & Mission Assurance Directorate is introducing a new campaign called “SPEAK Up!” exemplifying how all of us can make a positive difference in personal safety.

Campaign overview

“The goal is to provide a recipe for conducting a conversation about safety,” said David Loyd, chief, Safety & Test Operations Division.

A specific aim of the campaign is to remind us that safety is a top priority at Johnson Space Center. Another purpose is to provide the JSC team with an avenue to explore options about encouraging and implementing safe practices. It is important for JSC team members to understand how to intercede to promote safety in a positive way.

Astro Joe

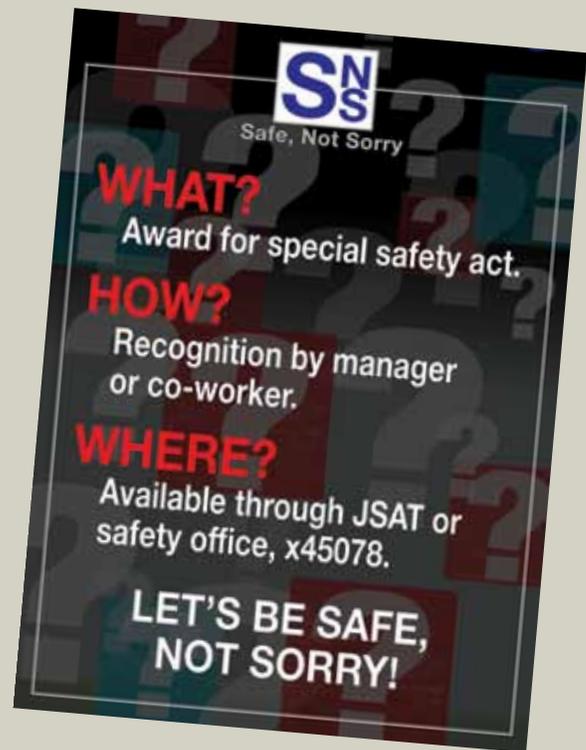
One promotional tool featured in the SPEAK Up campaign is an information card that includes a cartoon character named Astro Joe, a spokesperson for safety.

“For the campaign, I was the graphic designer,” said Vicki Cantrell, graphics artist/illustrator. “When we started this project, we were looking for something fun, lighthearted and eye-catching, so what better than something a bit retro in this fast-paced techno society? Being NASA, we wanted something that everyone would recognize right off the bat—Astro Joe and his retro rocket.”

“Creating a new image in the public mind is always a challenge, especially on the subject of safety,” said Mary Peterson, editor of the JSC Safety & Health News and a safety committee member. “You have to look at ways to engage the reader with something clever, innovative and in some way useful. In that sense, we hope Astro Joe will pique the imagination and become a sidekick who’s looked to for great tips, important information, and occasionally, a bit of humor.”

Peterson added that Joe will be part of the “Safe Not Sorry” Program, and it is hoped that when his image appears, people will automatically think about safety.

Astro Joe’s first exposure occurred at the December Contractors’ Safety Forum meeting, when the colorful SPEAK Up cards were distributed.



“The initial response was very favorable, and many of those present asked for additional cards to hand out to their fellow employees,” Peterson said.

Acronym

The cards illustrate the meaning of the acronym SPEAK, which is as follows:

- S**ee what’s happening right now. Be aware of safe behavior—yours and theirs and who or what is at risk.
- P**resent positive observations that translate to positive communications and reinforce safe behaviors.
- E**xplore options to do things more safely. Share and work things out openly.
- A**ct to eliminate hazards. Talk. Be receptive to safeguards that may not have been considered.
- K**now you can make a difference in preventing mishaps by working together, forging mutual respect and personal accountability.

“The bottom line is that we have rules, requirements and controls, but we are still having simple injuries and mishaps where the most effective prevention is situational awareness and personal intervention,” Loyd said. “With your help and active participation, the SPEAK Up message can make this an even safer place to work.”

Giving comes full circle as troops send their **thanks**

By Jenny Knotts

In November 2009, Johnson Space Center, along with Space Center Volunteers and Help Our Military Endure, held a drive for care-package donations for the troops. There were enough donations to fill more than 500 boxes.

The Clear Creek Independent School District also coordinated a



PHOTO/MSG ADAM S. GONZALEZ

Some of the troops who were lucky recipients of care packages display a few of their goodies.

"On behalf of the men and women of the 407 Expeditionary Communications Squadron, I wanted to thank you for the kind and generous gifts you sent for the holiday season. Much to our excitement, we received your gifts just a couple of days before Christmas, and they were gone before I knew it. The goodies and treats are appreciated, but even more than those, simply knowing that folks back home are thinking about us means more than you can imagine."

- Senior Master Sgt. Kevin D. Erne



NASA/PHOTO JSC2009E246290

Donations filled more than 500 boxes to send to the troops.

letter-writing campaign, and students of all ages wrote more than a thousand letters to be included with the packages.

The packages arrived in time for the holidays and to great enthusiasm. Here are some of the heartfelt thank-yous from the troops:

"I really appreciate your efforts to provide some cheer and thoughts of home. For those of us away from family that we care about for extended time, your packages—and especially the notes inside—are a welcome diversion."

- Command Sgt. Maj. Jeff Groat



NASA/PHOTO JSC2009E246264

Numerous volunteers contributed to the overwhelming success of the packing party.

"To have such wonderful support from a complete stranger is inspiring and helps us focus on our purpose here. Thanks for all you do. It truly does enable us to be better soldiers."

- Maj William M. Dunn



NASA/PHOTO JSC2009E246283

JSC Director Mike Coats takes a moment to sign the Wall of Honor in support of veterans and active military personnel.

Spotlight Bryan Grant

Human Resources Representative

Q: Coolest part of your job?

A: Working with managers and employees to help solve their problems and challenges.

Q: Favorite hobbies or interesting things you do away from the office?

A: I work for the National Football League as an instant replay official, based out of Houston, serving as an instant replay communicator. I've done this for three seasons. Before that, I served as the assistant replay technician in Atlanta for six seasons.

As an instant replay communicator, I work in the replay booth, keeping the other replay officials informed of activity on the field while tracking information about each play, monitoring the TV broadcast and serving as a liaison with the TV producer in the TV truck. (In addition), I work with referees and team Public Relations directors on a variety of issues.

I also foster Cocker Spaniels and play saxophone in a few local jazz groups.

Q: What did you want to grow up to be when you were a child?

A: I thought about being a lawyer, because it would be really cool to get paid to argue.

Q: What would people be surprised to know about you?

A: I'm an avid cyclist and have done several state rides, including a 2,000-mile bike ride in the year 2000 that crossed five states. Also, I'm an Eagle Scout and have a twin sister.

Q: What is your favorite quote or motto?

A: Go Jackets! (I'm a Georgia Tech alumni and serve on the Board of Directors of the Houston Area Georgia Tech Alumni Club.)

Q: Last good book you read?

A: "The Bear and the Dragon" by Tom Clancy.

Q: Who are your heroes and why?

A: My grandfather. He was one of nine children from a pretty poor family during the depression, yet he worked hard. He served in World War II, went to Georgia Tech on the GI Bill and wound up as the comptroller of a college in Georgia. My other hero would have to be George P. Burdell, a legend of Georgia Tech.

Q: What quality do you most admire in people?

A: Trustworthiness.

Q: What is your best memory at NASA or Johnson Space Center?

A: Watching the Return to Flight launch from the front row of the Teague.



PHOTOS/BRYAN GRANT

WANTED!

Do you know a JSC colleague or team that does something extraordinary on or off the job? Whether it's a unique skill, interesting work, special professional accomplishment, remarkable second career, hobby or volunteerism, your nominee(s) may deserve the spotlight!

The Roundup shines the light on one special person or team each month, chosen from a cross section of the JSC workforce. To suggest "Spotlight" candidates, send your nomination to the JSC Roundup Office mailbox at jsc-roundup@mail.nasa.gov. Please include contact information and a brief description of why your nominee(s) should be considered.



NASA/HARNETT jsc2009e286938



Johnson Space Center makes the holidays bright at Toys for Kids 2009

On Dec. 19, Johnson Space Center was instrumental in spreading cheer for children at the Toys for Kids 2009 holiday party hosted by Congresswoman Sheila Jackson Lee. The Driven to Explore mobile exhibit made a special stop at the George R. Brown Convention Center, providing the unique opportunity to touch a moon rock. Astronauts Robert L. Satcher Jr., Lee Morin, Nicole Stott and Ellen Baker were also on hand to share their experiences with the kids and sign autographs. Through interactive NASA-centered games, partygoers were exposed to JSC and the benefits of space exploration.

NASA/HARNETT jsc2009e286932



NASA/HARNETT jsc2009e286917

The ultimate space communications upgrade

Astronauts aboard the International Space Station received a special software upgrade in January—personal access to the Internet and the World Wide Web via the ultimate wireless connection.

Expedition 22 Flight Engineer T.J. Creamer made first use of the new system when he posted the first unassisted update to his Twitter account, @Astro_TJ, from the station. Previous tweets from space had to be e-mailed to the ground, where support personnel posted them to the astronaut's Twitter account.

"Hello Twitterverse! We r now LIVE tweeting from the International Space Station -- the 1st live tweet from Space! :) More soon, send your ?s"

This personal Web access, called the Crew Support Local Area Network, takes advantage of existing communication links to and from the station and gives astronauts the ability to browse and use the Web. The system will provide astronauts with direct private communications to enhance their quality of life during long-duration missions by helping to ease the isolation associated with life in a closed environment.

During periods when the station is actively communicating with

the ground using high-speed Ku-band communications, the crew will have remote access to the Internet via a ground computer. The crew will view the desktop of the ground computer using an onboard laptop and interact remotely with their keyboard touchpad.

Astronauts will be subject to the same computer use guidelines as government employees on Earth. In addition to this new capability, the crew will continue to have official e-mail, Internet Protocol telephone and limited videoconferencing capabilities.

To follow Twitter updates from Creamer and two of his crewmates, station Commander Jeff Williams and Soichi Noguchi, visit:

http://twitter.com/NASA_Astronauts

For more information about the space station, visit:

<http://www.nasa.gov/station>



Roundup

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On the road **again**



NASA/PHOTO AMANDA DILLER

At Kennedy Space Center, a crawler-transporter is enlisted to move space shuttle *Endeavour* up the five percent grade to the end of the crawlerway on Launch Pad 39A. The unfueled shuttle, mobile launcher platform and crawler weigh approximately 18 million pounds combined. The first motion on the 3.4-mile trip from the Vehicle Assembly Building, known as rollout, was at 3:13 a.m. CST Jan. 6. *Endeavour* was secure on the pad at 9:37 a.m.

Rollout is a significant milestone in launch processing activities. The primary payload for the STS-130 mission is the International Space Station's Node 3, Tranquility, a pressurized module that will provide room for many of the station's life support systems. Attached to one end of Tranquility is a cupola—a unique work area with six windows on its sides and one on top. The cupola resembles a circular bay window and will provide a vastly improved view of the station's exterior. The multi-directional view will allow the crew to monitor spacewalks and docking operations, as well as provide a spectacular view of Earth and other celestial objects. The module was built in Turin, Italy, by Thales Alenia Space for the European Space Agency.

For information on the STS-130 mission and crew, visit: <http://www.nasa.gov/shuttle>