This Week at NASA…

@MarsCuriosity

The most advanced robot ever sent to another world is nearing its destination, and NASA scientists and managers at a Headquarters news briefing called the Curiosity Rover mission the hardest one attempted in the history of robotic planetary exploration.

"It truly is a major step forward both in technology and in science, potential science return and science capability to unlock the mysteries of mars in places that have never been accessible to humankind in the past."

Curiosity is being transported to the Red Planet by NASA's Mars Science Laboratory spacecraft.

When it does land, Curiosity will then use a suite of laboratory instruments to analyze
samples of rocks, soil and the atmosphere, in an effort to determine whether Mars is, or ever was able to sustain microbial life.

“This is going to be a mission that requires a lot of patience. And as a scientist, this is not something for which there is a slam-dunk discovery, but many bits of information come together to build this and it's going to take us a while to get there.”

Unveiled during the briefing was a new Xbox 360 game developed in collaboration with Microsoft called “Mars Rover Landing.” Users take control of their own spacecraft while facing the extreme challenges of landing a rover in a specific location on Mars.

The “Mars Rover Landing” game is free and is available for download at the Xbox.
A 550-second test of the J-2X rocket engine has been successfully conducted on the A-2 Test Stand at the Stennis Space Center.

It was the first flight-duration test of the engine's nozzle extension, a bell-shaped device designed to increase engine performance.

The J-2X will power the upper-stage of NASA's planned two-stage Space Launch System, the SLS, which will propel the Orion crew capsule beyond low Earth orbit.

This test is the latest in a series of firings to gather critical data for development of the J-2X.

In Yuma, Arizona, NASA completed another successful drop test of the Orion crew capsule's parachutes. The vehicle was dropped from a C-17 plane at an altitude of about 25-thousand feet. The main objective was to see how the system
would respond if one of the three main ‘chutes
inflated too quickly.

It’s another milestone on the road to Orion’s orbital flight test, Exploration Flight Test-1, scheduled for 2014.

Expedition 32/33 Soyuz Commander Yuri Malenchenko, NASA Flight Engineer Suni Williams and Flight Engineer Aki Hoshide of the Japan Aerospace Exploration Agency are settling into their new digs aboard the International Space Station.

The trio was welcomed aboard the orbiting laboratory by station Commander Gennady Padalka, NASA Flight Engineer Joe Acaba and Russian Flight Engineer Sergei Revin.

The docking of their spacecraft came on the 37th anniversary of the historic link up of Apollo and Soyuz spacecraft in 1975 that began U.S.-Russian cooperation in human spaceflight.
International Space Station Program Scientist Julie Robinson was at the Marshall Space Flight Center’s Payload Operations Center to encourage ISS Ambassadorship among employees.

Robinson is traveling to NASA centers to promote a better understanding of the research and technology development being done in the world’s only laboratory in microgravity.

"Those scientific discoveries and the way that they benefit us here on Earth are really some of the most important messages that NASA needs to share with our taxpayers about how valuable the space station is and how much it’s driving our economy."

So we’re just trying to make sure that our own employees know those messages and then we’re also trying to share them with the world.”

NASA astronaut Dan Burbank visited Goddard Space Flight Center.
Space Flight Center to share experiences from
his five-month stay aboard the ISS as a member
of the Expedition 29 and 30 crews.

“If you ride a rocket to space, as soon
as the engines quit – within the first hour
you’re already becoming a creature of space.

Burbank and his crewmates, Anton Shkaplerov
and Anatoly Ivanishin, returned to Earth on
April 27.

Aero Day on the Hill provided an opportunity
for representatives of NASA’s Aeronautics
research the agency is conducting to make
air transportation more efficient, safe, and
environmentally friendly.
We are setting the vision for the country.

We are leading the aeronautics community, so it's all about direct tangible compelling benefits that you can enjoy today and for years to come.

ARMD works to solve the challenges that exist in our nation's air transportation system through innovative technical concepts, and dedicated research and development.

Space Shuttle Enterprise made its official debut before New York's public as the centerpiece of the Intrepid Sea, Air and Space Museum's newest attraction, “Space Shuttle Pavilion”.

This magnificent machine is a tangible example that our dreams of exploration, of reaching our higher potential are always within our reach if we try for them.”

Also part of the Grand Opening Celebration
- a host of NASA exhibits, displays, and
educational demonstrations showcasing the past, present and future of aeronautics and space exploration.

Event guests met and mingled with a number of current and former NASA astronauts.

Noted space historian John Logsdon spoke at the Kennedy Space Center to detail some of the decisions then-President John F. Kennedy made to set the nation on a course to send astronauts to the moon.

“It was the Gagarin flight and in particular the domestic and international reaction to the Gagarin flight that stimulated Kennedy to pay attention to human spaceflight and as he paid attention to come to realize the symbolic importance of not being in a leading position.”

Logsdon said Kennedy made defining contributions to keep the Apollo program on course during the rest of his presidency.
“Get to the moon before the Soviets, that was Kennedy’s overriding motivation.”

Logsdon, who has written extensively about the American space program and space policy,
said the president spoke often about involving the Soviet Union in a joint venture to the

moon, even going as far as to propose the idea before the United Nations.

“Kennedy’s first choice would have been to cooperate.

It was Khruschev that said no.”

Of course, Apollo 11 met Kennedy’s challenge by putting two men on the moon before the

end of the 19-60s.

And, six years later, the United States and Russia began their cooperation in human spaceflight

that eventually led to our partnership on the International Space Station.

“more forward drifting to the right a little … 30 seconds … contact light.”
Ok engines stop.

Tranquility base here … the Eagle has landed.”

July 20 marks two important events in NASA history.

Forty-three years ago, on that date in 1969, Apollo 11 astronauts Neil Armstrong and Buzz Aldrin helped NASA accomplish the challenge set forth by President Kennedy of putting Americans on the moon before 1970 when the duo became the first humans to step foot on another heavenly body.

While Armstrong and Aldrin collected the first lunar soil and rock samples on the surface, command module pilot Michael Collins kept vigil in the Columbia module orbiting above.

The three reunited and landed safely in the Pacific Ocean four days later.

And 36 years ago, on July 20, 1976, the Viking 1 Lander separated from the Orbiter and touched down at Chryse Planitia to become the first spacecraft to successfully land on Mars and
Together with Viking 2, which landed a month later, the orbiter imaged the entire surface of the Red Planet, transmitting high resolution photographs of its terrain that characterized the structure and makeup of its atmosphere.

Viking 1 also took and analyzed surface samples for composition and signs of life.

Much like its successors, the twin rovers Spirit and Opportunity, the Viking spacecraft were designed for 90-day missions but produced valuable data for years.

Forty years ago, on July 23, 1972, NASA, in cooperation with the U.S. Geological Survey launched the first Landsat satellite from California’s Vandenberg Air Force Base.

Known at that time as the Earth Resources Technology Satellite, it was the first Earth-observing satellite launched with the expressed intent to study and monitor our planet's landmasses.
years past its designed life span.

Five Landsat satellites have since been sent into orbit.

The program represents the world's longest continuously acquired collection of space-based, moderate-resolution, land remote sensing data -- imagery that provides a unique resource for everything from agriculture and geology to education and emergency response and disaster relief.

And that's This Week @NASA!

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