NASA And Lockheed Martin Launch Exploration Design Challenge For Students

DENVER, March 11, 2013 /PRNewswire/ -- Students from kindergarten through 12th grade will have the opportunity to play a unique role in the future of human spaceflight through participation in NASA's Exploration Design Challenge. Developed through a partnership between NASA and Lockheed Martin [NYSE: LMT], the program challenges students to research and design solutions to protect astronauts from space radiation.

"Space exploration has inspired and fascinated young people for generations, and the Exploration Design Challenge is a unique way to capture and engage the imaginations of tomorrow's engineers and scientists," said Marillyn Hewson, CEO and President of Lockheed Martin, speaking at an announcement event today at NASA's Johnson Space Center. "We know nothing teaches like real hands-on experience and that's what this program brings to a new generation of explorers."

Lockheed Martin is the prime contractor to NASA for the Orion Multi-Purpose Crew Vehicle, the nation's first interplanetary spacecraft designed to carry astronauts beyond low Earth orbit on long-duration, deep-space missions. Protecting astronauts on these distant travels is an important and very real problem that needs to be solved.

"America's next step in human space exploration is an ambitious one and will require new technologies, including ways to keep our astronauts safe from the effects of deep-space radiation. That is the focus of this challenge, and we are excited that students will be helping us solve that problem," said NASA Administrator Charles Bolden.

Students in grades K-12 can study the effects of radiation on human space travelers and analyze different materials that simulate space radiation shielding for Orion. After participating in activities guided by their teachers, students will recommend materials that best block harmful radiation.

Students in grades 9-12 can take the challenge a step farther and design shielding to protect a sensor inside the Orion capsule from space radiation. The winning design will be flown in the Orion capsule during Exploration Flight Test-1 (EFT-1) scheduled for September 2014. All students in grades K-12 that participate in this challenge can join students from around the world to celebrate EFT-1 by having their names flown on-board as honorary crew members.

Lockheed Martin is collaborating with the National Institute of Aerospace (NIA) to produce the Exploration Design Challenge and STEM (Science, Technology, Engineering and Math) engagement activities tied to the EFT-1. Lockheed Martin has signed a Space Act Agreement with NASA for a strategic alliance on education and public outreach activities. An annex to the agreement covers the scope of work Lockheed Martin will provide for the Education Design Challenge to engage and inspire future generations of scientists and engineers.

NASA's Exploration Design Challenge brings cutting-edge learning to educators and students with standards-based activities, print and video resources developed by leading education experts at NIA with content from Prairie View A&M University, and technical guidance from Lockheed Martin and NASA's Teaching From Space program at Johnson Space Center.

Headquartered in Bethesda, Md., Lockheed Martin is a global security and aerospace company that employs about 120,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration, and sustainment of advanced technology systems, products, and services. The Corporation's net sales for 2012 were $47.2 billion.

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To learn more about the Exploration Design Challenge, visit:
http://www.nasa.gov/education/edc

To learn more about Orion and the EFT-1, visit:
http://www.nasa.gov/orion
http://www.lockheedmartin.com/orion

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