

New NASA space technology app educates users at hypersonic speeds

September 6 2012, by David Steitz And Kathy Barnstorff

Want to try your hand at landing an inflatable spacecraft? All you need is a smart phone, a computer or a tablet.

NASA has released a new educational computer Web game based on its Hypersonic Inflatable Aerodynamic Decelerator (HIAD) project. The game can be played on the Internet and Apple and Android mobile devices.

The application can be downloaded free from those mobile device stores and on NASA's HIAD website at: www.nasa.gov/hiad

HIAD is an innovative inflatable spacecraft technology NASA is developing to allow giant cones of inner tubes stacked together to transport cargo to other planets or bring cargo back from the [International Space Station](#).

"This game will help introduce new generations to NASA technologies that may change the way we explore other worlds," said Mary Beth Wusk, HIAD project manager at NASA's Langley Research Center in Hampton, Va. "It gives players an idea of some of the engineering challenges rocket scientists face in designing spacecraft, and does it in a fun way."

The game's premise is an [inflatable heat shield](#) that returns cargo from the space station to Earth. As the HIAD summary puts it, "to successfully guide an inflatable spacecraft through the super heat of

atmospheric reentry requires the right stuff. If you inflate too early, your shape is incorrect or your material isn't strong enough - you burn up. And if you get all that right and miss the [target](#) the mission is a bust."

The game offers four levels of engineering mastery and gives stars for each successful landing.

HIAD is more than just a game. It's a real technology being tested in laboratories and in flight. A prototype HIAD launched July 23 from NASA's Wallops Flight Facility on Virginia's Eastern Shore. The successful [flight test](#) demonstrated that lightweight, yet strong inflatable structures may become a practical way to help us explore other worlds.

NASA is developing the technology as part of the Space Technology Program's Game Changing Development Program. NASA's [Space Technology](#) Program is innovating, developing, testing and flying hardware for use in future science and exploration missions. NASA's technology investments provide cutting-edge solutions for our nation's future.

Provided by NASA

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