Boeing Sponsors Local High School Team At Mars Settlement Competition

Once again the imaginations of many space exploration enthusiasts are running full throttle with the two recent high-profiled launches of Boeing [NYSE:BA] Delta II rockets carrying six-wheeled robot rovers bound for Mars.

Terraformers decked in space suits trekking across the desert sand on the Red Planet to reach a bio-domed habitat they call home seems more plausible for some these days. Especially for 96 high school teenagers who are using the successful NASA Mars missions for inspiration as they prepare for the 10th Annual International Space Settlement Design Competition at Kennedy Space Center, Fla.

A team of students from Clear Creek High School is joining seven other high school finalist teams from Colorado, California, Florida, Texas, Maryland and Australia in a competition to design a Mar's settlement.

The Clear Creek team from League City, Texas is representing the state for the fourth time during the competition, which runs from July 12-14. The local nine-member team has alternate students from Cypress Fairbanks, Memorial and Carnegie Vanguard high schools. Boeing NASA Systems, headquartered in Houston and a business unit of Boeing Integrated Defense Systems, is the team's sponsor.

The competition is sponsored by the American Institute of Aeronautics and Astronautics (AIAA), an organization dedicated to advancing the arts, sciences, and aeronautics and astronautics technology. Anita Gale, competition co-founder and a Shuttle engineer for Boeing says "This competition provides an avenue for students to showcase their creativity and ingenuity, and in return shows the students what it is like to work in the aerospace industry."

During the three-day international meet, the eight teams will be paired, given corporate identities and asked to compete with other paired teams to prepare the best design proposal. Each paired team will act as an independent aerospace company vying for a contract with the AIAA to design a settlement on Mars.

Individuals work within a realistic industry organizational chart, and space industry professionals volunteer to serve as "CEO" of each of the fictional companies for the competition. The CEOs help the teams to remain focused on the task and work within specified industry parameters.

The contest emulates, as closely as possible, the experience of working on an industry proposal team with participants utilizing engineering, technical and management skills. And not unlike the engineering wizardry that created the Mars rovers and the Delta rockets that launched them, the students have to use sound science to support their design.

"Designs must meet the test of staying within the bounds of anticipated technology and obeying the laws of physics," says Gale. "Realism is emphasized, so not only must proposals include descriptions of the structure and amenities for the people living at the settlement but also cost and scheduling estimates for construction.

"And just as in real life, the students work with people they just met, argue over technical issues, disagree with management. They will work hard, get tired, and have fun," she adds.

Students have access to such resources as technical papers, computers and a library to develop their design proposals as well as volunteer structural, operations, and human and automation engineering advisors from the industry.

To qualify for the international competition, student teams submitted proposals earlier this year for a space settlement orbiting in the asteroid belt between Mars and Jupiter. The written entries were reviewed and judged by engineers from AIAA.

Proposal designs for this competition will be judged for thoroughness, credibility, balance and innovation by a panel of industry experts. Each member of the winning team will receive a trophy, engraved medal and a certificate.

Though many of the design concepts that result from the competition may be ahead of their time, students walk away with not only a sense of accomplishment but also of new found self-appreciation. "Many students make decisions about education, career and life based on their competition experiences," says Gale.

Sultana Ali, an alumna of the international competition who has a degree in international business marketing, credits the contest with helping to put her life into perspective. Ali says her life was difficult during her high school years, and when she decided to participate in the competition as a senior, it gave her purpose and direction.

As a result of her experience, she is now a competition mentor for students at her old high school. "I did not have the best self-esteem, although I felt like I was intelligent and capable. I was afraid of being a failure," says Ali. "But the competition showed me what I was truly capable of doing, and I went on that year to receive two academic scholarships for college. Now I try to give back what I received by encouraging contest participation."

Gale says Ali's story is just one of many. "The competition teaches more than just mechanics; it teaches young people how to find their inner strength."

A unit of The Boeing Company, Boeing Integrated Defense Systems is one of the world's largest space and defense businesses. Headquartered in St. Louis, Boeing Integrated Defense Systems is a $25 billion business. It provides systems solutions to its global military, government and commercial customers. It is a leading provider of intelligence, surveillance and reconnaissance; the world's largest military aircraft manufacturer; the world's largest satellite manufacturer and a leading provider of space-based communications; the primary systems integrator for U.S. missile defense; NASA's largest contractor; and a global leader in launch services

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Note to editor: Visual opportunities at the competition include participants working on computers to prepare proposals, developing drawings of settlement exterior designs and interior housing, sketching robots and vehicles, and making presentations to a panel of judges.

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