

Westside Homeschoolers win Honeywell Fiesta Bowl Aerospace Challenge

A team of homeschooled children from the West Side Home Educators group won the Honeywell Fiesta Bowl Aerospace Challenge with the space station they designed and built.

The model space station was designed to service satellites that beam solar power down to Earth. The station had to support a crew of 200 people for two years. It would be the sole source of life support, including clean air, surface areas large enough to produce enough food, waste management and recycling. And they could not spend more than \$50 for the finished product.

They got the trip of a lifetime and spent two days with astronaut Steve Lindsey at the Johnson Space Center in Houston, TX. The team was also recognized on-field at the Fiesta Bowl.

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THEIR MISSION ENDED A-OK

Nora Fascenelli/The Arizona Republic/Jan. 10, 2004

They all perform in public, they have all been home- schooled, and together, they all won the Honeywell Fiesta Bowl Aerospace Challenge.

When the judges announced last week that the Westside Home Educators Homeschool Support Group won, it was music to the students' ears.

And this team knows music. All four winners - Pearl Mahar, Ellen Rutter, Andrew Russell and John Russell - are accomplished violinists.

"We really weren't intimidated or scared," said Pearl. "We all play violin, and we've all been in front of large audiences. So we didn't worry about stage fright."

More than 65 Phoenix-area teams participated in the preliminary rounds. Five teams returned as finalists for the Dec. 30 competition held at the Challenger Space Center in Peoria.

Westside team members and their parents say homeschooling gave them certain advantages.

"We were able to concentrate on the project and allocate as much time to it as we wanted," said coach Chris Mahar, a maintenance instructor at Palo Verde Nuclear Plant.

"We did all our regular work, while incorporating language arts, reading, writing, research and computer skills while we worked on the project. Our math calculations crept into the realm of engineering, science, physics and chemistry."

Staying focused was a challenge, Mahar said. Keeping the kids on track was tough when their imaginations threatened to divert their attention.

"It's easy to get distracted, go off on tangents with ancillary research missions and miss the real focus of the task," parent Sue Russell said.

Mahar calls the syndrome "mission creep," and admits that working for a power company gave his team an advantage.

"The mission was clear. Teams were asked to design and build a model space station to service satellites that beam solar power down to Earth," Mahar said. "The station had to support a crew of 200 people for two years. It would be the sole source of life support, including clean air, surface areas large enough to produce enough food, waste management and recycling."

The price tag of the finished product could not exceed \$50.

Students rounded up reusable items, buckled down and got to work. They stayed on course and their efforts paid off.

Minimizing the negative effects of zero gravity is an example of the challenges faced by the team. To prevent loss of bone and muscle mass during two years in space, team members devised a model that constantly spins, mimicking gravity and reducing the debilitating effects of weightlessness on the body, Rutter said.

"They stopped thinking like kids and began thinking like adults doing a big business proposal," Mahar said. "By the end of the program, it was something real to them. Something tangible and plausible."

Each team member was responsible for every aspect of the project. Although they avoided specializing, everyone was assigned a task.

Andrew Russell, 10, was the construction person. His proficiency with Legos uniquely qualified him for the task.

Pearl Mahar, 11, was the team's ringer when it came to quick responses to challenging questions from the judges.

Ellen Rutter, 10, did most of the painting.

John Russell, 12, did a little bit of everything.

Everyone helped put together the 45-page report detailing their model and its many functions.

Parents provided moral support while editing and checking spelling.

In the end, all that hard work paid off. As grand prize-winners, team members and their coach will visit Kennedy Space Center in Florida for a behind-the-scenes tour of NASA's launch facility.

Winning was not the reason these team members entered the competition, but it became more important once they arrived at the Challenger Space Center for the preliminary contest, Russell said.

"We looked around and realized we actually had a chance of winning," Russell said. "Winning took on a whole new level of importance. There was a new dimension of competitiveness and everyone put out their best efforts."

As judges announced the five finalist teams in the preliminary competition, 10-year-old Ellen Rutter crossed more than just her fingers.

"Our team was the very last one of the finalists announced," Ellen said. "I crossed my arms, my legs, my ankles and my toes. I even crossed my eyes."

Astronauts Michael Bloomfield, Steven Lindsey, Lee Morin, Carlos Noriega and Stephanie Wilson helped with the final judging and congratulated the winning team and the four other finalist teams.

