



## Science and Math team floating on egg shells

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DURHAM -- A significant shift in thinking and a small hole made Akash Ganapathi and Trent Stohrer national champions.

The N.C. School of Science and Mathematics students may not be rocketed to national fame and major fortune by their victory in the 2009 National Science Olympiad Tournament held recently in Augusta, Ga. But their first-place showing in the Egg-O-Naut competition was good enough to garner the juniors a little green, as in \$1,000 scholarships each for Ganapathi and Stohrer.

The secret of their success? "We cut an extra hole in the top of the parachute so that there was more air flow through the parachute," Ganapathi said.

The NCSSM team, already state champions, finished 18th out of 60 teams overall. Ganapathi, of Cary, and Stohrer, of New Bern, had the team's only outright victory. But the Unicorns garnered top-10 finishes in three other categories: environmental chemistry (third), chemistry lab (sixth) and herpetology, or the study of amphibians and reptiles (seventh).

The goal of the Egg-O-Naut competition is to design a rocket out of a one-liter plastic bottle that will keep an egg aloft for as long as possible. Bonus points are awarded for egg-rocket separations and for retrieving an unharmed egg on the ground.

Ganapathi and Stohrer didn't retrieve their flying egg, which hung up in a very tall tree after about 1 minute, 10 seconds. But no one came close to their time.

Ganapathi explained the thinking that led to their victory: "Our goal with this egg is for it to remain in the air as long as possible, so we don't care if it flies off everywhere, you know?" he said. "We were like, wait. We're not trying to model off of a real parachute or how a real parachute works, which is what most like every other team did."

A small extra hole in the top of the egg chute increased lift dramatically, Ganapathi and Stohrer found. "And if there's any wind then it gets carried off quite considerably higher than any normal parachute, whose goal is to actually reach the ground," the Caryite said.

When they launched their rocket in the national competition, the egg stayed around and above the altitude at which the parachute deployed. Ganapathi estimated it floated 80 to 100 feet above the ground.

The eggonautics student said he wasn't sure whether he or Stohrer had the insight that led to victory. They tested their

design for months.

The Egg-O-Naut event, sponsored by the American Egg Board, was new this year. NCSSM Science Olympiad adviser John Kolena said the Olympiad tends to keep events no longer than five years or so. That keeps victorious teams from handing down their secrets year after year.

Kolena, who holds a doctorate in astrophysics from Indiana University and who taught at Duke University briefly before joining the Science and Math faculty in 1981, has been the school's Science Olympiad adviser for a quarter-century. The 25-year-old program is run by an Oakbrook Terrace, Ill., organization.

"This is a competitive outlet for [NCSSM students], a chance to show that they can do something as well as or better than their peers, and I think they enjoy that kind of thing," Kolena said.

He credited student manager/coach Justin Huang of Cary, one of the 16-person team's two seniors to compete at nationals, for much of the school's success.



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