

## Science Olympiad: On a wing and a paper clip

By Mark Gurdish [mgurdish@civitasmedia.com](mailto:mgurdish@civitasmedia.com)

March 11, 2015

---



LEHMAN TWP. — You think balsa wood and rubber band planes are safe? Wyoming Area High School senior Amy Alder made designing and building one downright dangerous: “I broke some ribs.”

Wait, what?

“Not my ribs,” Alder laughed. “Ribs on the wings.”

That was well before Alder and sophomore Kara Dooner brought their plane to compete in the “Wright Stuff” event of the annual regional Science Olympiad Wednesday, hosted by Penn State Wilkes-Barre. That competing plane had all ribs intact.

“Wright Stuff” involves building a plane that will stay aloft the longest, looping lazily. While weight and wing design are key, the looping part can be equally important. The North Pocono team craft had plenty of loft but flew out of the roped-off zone, crashing into event judge John Clapp’s chair.

Alder and Dooner had a serious setback the night before the competition: A plastic piece joining two parts of the plane’s fuselage had snapped, and they pinned it together with a piece of a paper clip. Undaunted, Alder said she enjoyed the Olympiad because, unlike many other competitions where the big stress comes the day of the event, by the time you actually started here, there was little to fret.

“Everything’s done,” she said. “What it is is what it is.”

Their jerry-rigged joint held, but the plane preferred to go down rather than up, batting propeller tips against the floor on first try.

Clapp watched and rattled off mistakes in the design by Alder and Dooner.

“You need quality rubber, most of these kids use K-mart rubber ... You want to coat your bands with silicone lubricant ... They didn’t stretch their rubber band.

“Give me 30 seconds and I could double the flight time for half these planes.”

The Olympiad lists 36 events that range from launching bottle rockets to building a model bridge and deliberately destroy it. In a racquetball court across the hall from the gym, Dallas senior Eric Davies and junior Rachel Luke found themselves scrambling to overcome a bad break, literally, in the “Scrambler” event.

Students had to build a vehicle that could hold an egg jutting out in front and propel it across the floor as fast as possible while stopping before the egg hit

the wall. Their problem? The part intended to cradle the egg broke off in transit. Davies used rubber bands to hold it in place but that was a “construction violation” because it was too flexible.

Their braking system was elegantly simple: a threaded front axle with a wing nut that, with each wheel rotation, moved closer to the axle end, at which point it would lock up the wheels. Unfortunately, it went unproven. Propelled by a whack from a weighted pendulum, their car barely made it half the distance to the target wall.

Still, having competed in a room lined with vehicles with wheels ranging from small model car types to compact disks and even antiquated vinyl LPs, Davies, a competitor since eighth grade, said the Olympiad is always interesting.

“Its nice to see how one idea for an event is so different from somebody else’s idea.”

With about 800 students from more than 50 middle and high schools, the Olympiad was a mother lode of different.

---

**Link:**<http://www.timesleader.com/apps/pbcs.dll/article?AID=/20150311/news/303119925/>

© 2014 Civitas Media, All rights reserved