

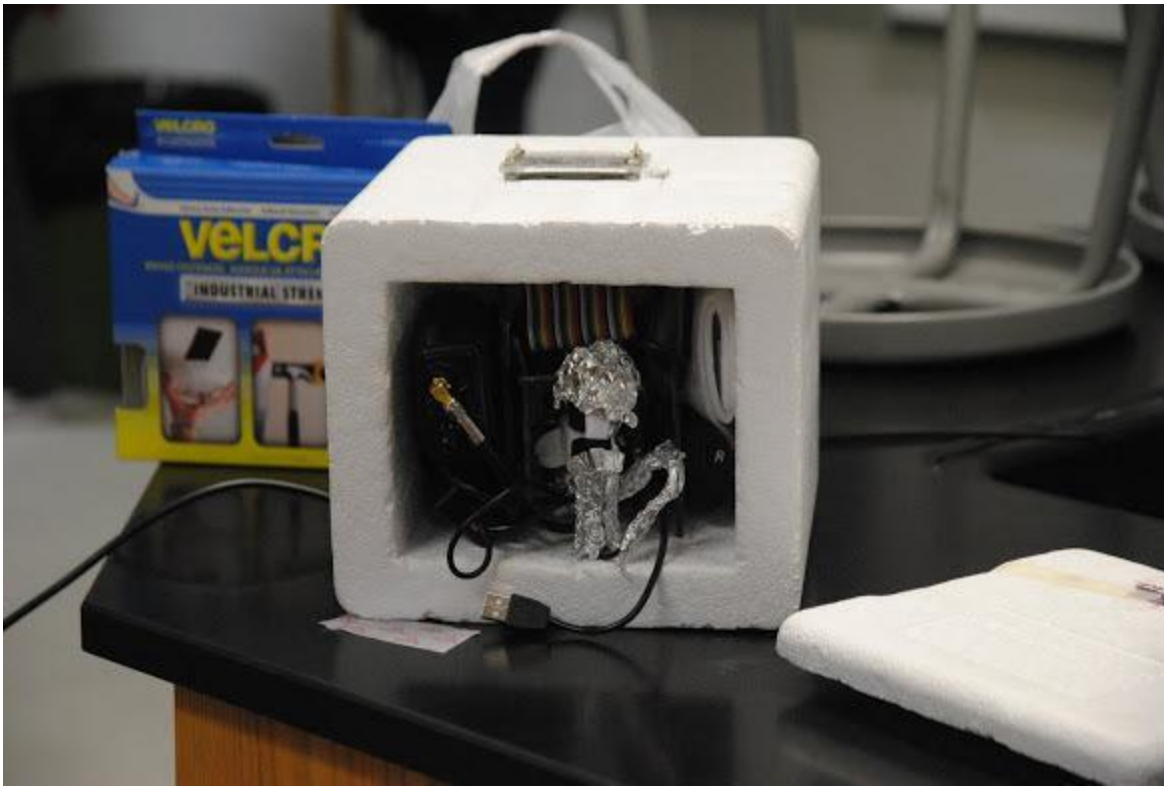


# **Rising Stars: Bunker Hill students, physics teacher prepare balloon that treks high into space**

by Dan Brannan, Content Director  
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BUNKER HILL - Some Bunker Hill High School students and their physics teacher Jeremiah Goltz have put their class on the map with a recent video documentary of a weather balloon experiment. Goltz is also the Minutemen's boys basketball coach.

State Sen. Andy Manar attended the balloon launch for the school's project. Bunker Hill is the hometown of Sen. Manar.



“The physics class at Bunker Hill High School launched a high altitude balloon into near space on Tuesday, April 24,” Goltz said. “The balloon was sent up carrying a GoPro video camera,

# RISING ST★RS -CLUB-

APRS tracking hardware, a battery pack, and a granola bar (the students wanted to say they ate space food).

“We spent many months planning and preparing for this event. Our class researched which equipment we would need to purchase in order to have a successful flight. They learned the physics of lift, helium, and velocity and the technology needed to predict our flight length and path. We engaged in a 'fox hunt' which involved our students tracking and locating homing beacons. This is very similar (if not the same) to how planes are located which disappear from radar. These and many other tasks were performed in order for us to achieve a successful flight.

“We launched from Bunker Hill High School, Illinois at 9:44 a.m. and recovered our equipment in Venedy, IL., at 12:21 p.m. The total flight time was 2 hours and 4 minutes and we reached an altitude of approximately 20,000 meters (65,000 feet). This is twice the cruising altitude of most commercial aircraft.”

One question someone might ask is what about the Federal Aviation Administration in a situation like this, getting permission because of potential interference with aircraft.

“I spent about 20 minutes on the phone with the FAA to give them the information they needed to issue a notice to all aircraft that we were sending our balloon into the air,” Goltz said. “We also had a radar reflector attached which would make it much easier for aircraft to spot via radar. Most commercial aircraft fly at a cruising altitude of 25,000 – 30,000 feet. We reached twice that height.”

Goltz continued: “Although we hoped that we could have reached an even higher altitude we were all very pleased with the results of this experiment. Through much research, trial and error, and a lot of anticipation, Bunker Hill, Illinois, can now say that we have been closer to space than many have ever reached.

“A special thanks goes out to the expertise of Dan Frey who supplied us with the research and equipment on how to track our balloon. And also, thank you to Tom Declue with GRP construction for donating the helium we needed to make our balloon fly. We are proud of our results and hope that many other students and teachers around the area will be inspired to fly a balloon of their own.”

Goltz said what he and the kids were able to accomplish was a dream come true for them.

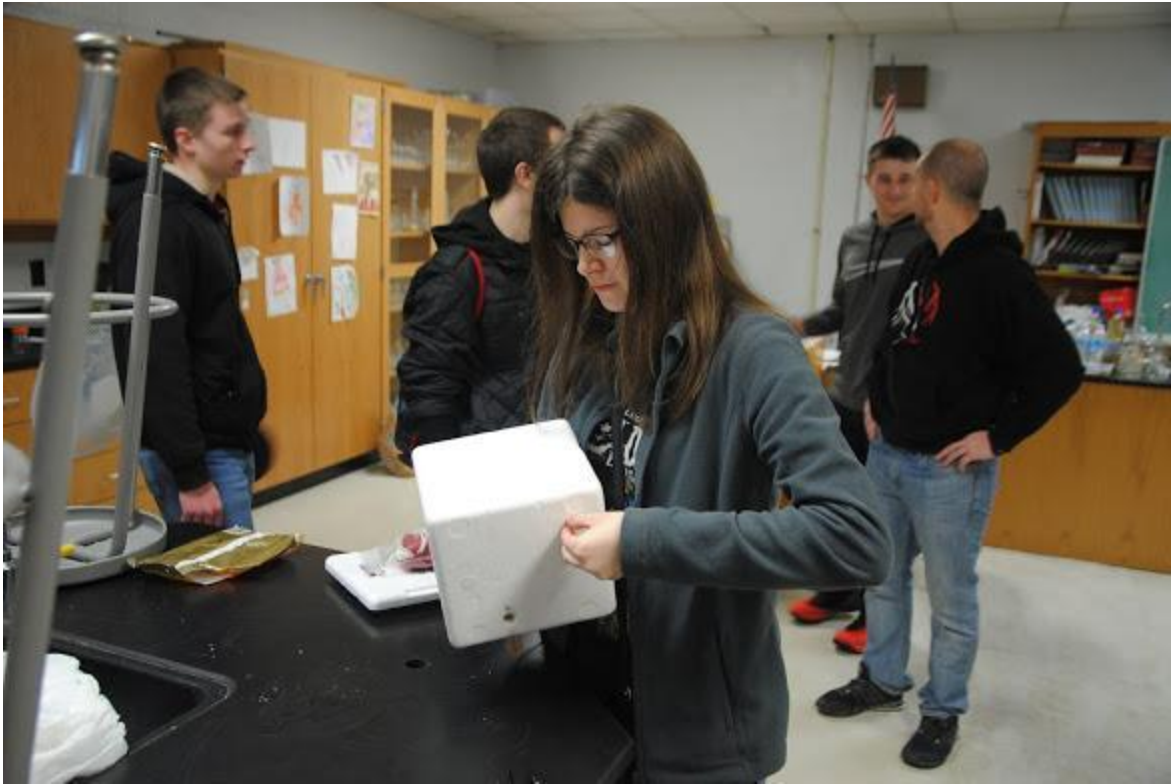
“We were able to buy the supplies with our science funds and GRP donated helium for free, which was the biggest expense,” he said. “We were very thankful to GRP for the donation. This is the most exciting thing I have ever done other than getting married and having kids. When you send something up that high and take video of earth, it is something you will never forget. I will never be in a spaceship that goes up that high.”

The physics teacher said he was very proud of his kids in his class.

“Two of the kids are valedictorians of this year’s senior class,” he said. “There is another in class who will likely be the valedictorian next year. I think after they did this, it was way more amazing than they thought.”

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