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Shelton Students' Experiment Gets A Place On The Shuttle

What's Microgravity's Effect On Bacteria? They'll Find Out Soon

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As Space Shuttle Endeavour launched Monday, samples of bacteria aboard the historic flight received a ceremonious send-off in Shelton.

The bacterium — *Bacillus thuringiensis* — is part of an experiment that earned a spot on NASA's second-to-last shuttle mission. The students behind the experiment — Shelton High School seniors Omar Sobh, Leann Misencik, Kayla Russo, Jason Shnipes and James Szabo — gathered in the classroom of the team's adviser, science teacher Mary Clark, for the launch. Joining them were well-wishing classmates, parents and school staff. A broadcast of the launch was projected onto the screen at the front of the room.

The experiment, "Development of Prokaryotic Cell Walls in a Microgravity Environment," is one of 16 science experiments on the shuttle, chosen from among 447 finalists. The school's participation was part of a project organized by the National Center for Earth and Space Science Education.

The experiment involves growing samples of *Bacillus thuringiensis* (often used as an environmentally friendly pest control) on the shuttle to see what prolonged weightlessness does to its development. Specifically, they want to see if the lack of gravity prevents its cell walls from fully developing.

For comparison, the students have set up a station in their classroom to grow earthbound samples of the bacteria. When the shuttle lands in 16 days, the experiment will be sent back to Shelton and the students will compare the two. The experiment even has an official logo, designed by sophomore Jessica Olavarria, which also went up in the shuttle.

At the 8:56 a.m. launch, the students, Clark and the school's headmaster, Beth Smith, huddled together for the countdown, and let out a cheer at lift-off.

The last time the Endeavour was scheduled to launch, April 29, the students had traveled to Florida to see it live. But hours before lift-off, technical problems delayed the launch.

"We were there in Kars Park, and you could feel the tension building, and then you heard the whispering going around — 'They're scrubbing the launch,'" said Jason Shnipes, 18. Even off-site, though, he added that Monday's launch was still exciting. "It's not Florida, but it's pretty cool."

Sending bacteria to the heavens might do more than simply satisfy scientific curiosity. Omar Sobh, 17, explained that it could shed some light on why astronauts are more susceptible to bacterial infection after returning to Earth. As part of the experiment, the students will apply the antibiotic ampicillin to both batches of the bacteria samples. If their hypothesis is correct, the bacteria that went into space and back will be weaker and more affected by the antibiotic.

"It's great for him and the whole group — it's gets them very excited about science and what it can do for the world," said Omar's father, Tarek M. Sobh. A robotics resesarcher at the University of Bridgeport, he couldn't help sounding a little jealous. "For someone like me, I would give an arm and a leg to have my experiment go up on the shuttle."

Tina Henckel — the science, technology, engineering, mathematics and data management coordinator for the Shelton Public Schools — was the team's other adviser. She coordinated the funding for the project's $15,000 cost, donated by the University of Hartford Space Consortium and PerkinElmer, a Massachusetts-based company that develops technology to benefit health and the environment.

Bacteria may not get much media attention, but Shelton High School has gotten more than its share recently, thanks to the controversy over the suspension (lifted over the weekend) of one student for his unorthodox approach to asking a potential date to the prom. Smith ran a tight ship Monday. She politely but firmly informed members of the media that any prom-related questions would be swiftly answered with an escort out the building.